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Why Does Modern Science Need a Father?:  
French Cartesianism and the Performance of the Scientific Subject

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The moment of this story's end was in 1709, when an article appeared in the scientific journal of the Jesuit order in Paris, *Journal de Trévoux*. After decades of abuse of rationalist philosophies in general and Descartes' in particular, the first sign of the changes to come appeared as Cartesianism and its values found acceptance within traditional establishments which would have been unthinkable thirty years earlier. They wrote,

Occult qualities, especially those associated with attraction and *pesanteur*, were once thought to be so banished from physics and from nature by M. Descartes, that greatest of geometers. One only talked about them when looking for an example of false reasoning founded upon infantile prejudices. Able English mathematicians, however, have returned them to the world.<sup>1</sup>

The philosopher whom these partisans of a traditional cultural order had, from his textual debut in 1637 until this moment, represented as a peddler of “atheistic and materialistic mechanism” now served in defense against a greater threat from across the Channel, which was represented in France by *attractionists* in the English style.<sup>2</sup> This theoretical position, espoused as Isaac Newton's doctrine of Universal Gravitation, was antithetical to the sensibilities of the French establishment based in the “New Philosophy,” and was rejected on principle until it was no longer feasible to do so.<sup>3</sup> This suggestion that the workings of nature might consist in themselves of relations for which neither the eye, nor the *mind's* eye, could ever hope to gain a basis for understanding, was not only regarded as a metaphysical impossibility but an insult to the good name of the subject of knowledge as well. Explanations in terms of *action at a distance* were called *occult*, a term which scholastic discourses of the day used to mean “insensible,” but which

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<sup>1</sup> J.B. Shank, *The Newton Wars & the Beginning of the French Enlightenment* (Chicago: The University of Chicago Press, 2008): 125.

<sup>2</sup> Ibid., 126.

<sup>3</sup> Roger Hahn, *The Anatomy of a Scientific Institution: The Paris Academy of Sciences, 1666-1803*. (Berkeley: University of California Press, 1971): 5. This turning point occurred decades into the eighteenth century, well after the end date for this project, and is studied as the Enlightenment.

under Cartesian usage came to also mean “*unintelligible*,” in virtue of their crucial theoretical conflation of the two.<sup>4</sup> In many regards, this is the story of the period of most confusion in the course of the emergence of the metaphysics of modern science, which is to say, prior to such metaphysical questions being subsumed by a regime of *mathematical modeling*; precisely how *abstracta* might represent particular states of affairs in this way was an open question. Those who rejected the *old* science still taught dogmatically in the schools and longed instead for a new one had to create the discourses they needed to justify their views themselves, and do so in the face of ostracism. It is precisely because it is *not* yet the scientific establishment it would become that Cartesianism is of such importance.

This narrative is structured as a historical interpretation of the western-civilizational “father of modern science” theme, not in the explanatory capacity it has served these past three centuries, but as a historically finite act of creating (as a text) the possibility of philosophical evolution within a community. As a genealogical account of the social formations which contextualized the “New Philosophy” as both sufficiently illicit and exciting to be referred to without name, this is an exploration of the tenuous road to founding fatherhood.<sup>5</sup> This paternity which is typically only considered *after* its establishment as an important explanatory frame, typically considered a new discipline of knowledge, will appear instead as a long and uncertain path through a contentious period of French history. It is precisely the moments of “breaking away from existing structures” in which the author faces the likelihood of ostracism but also the possibility of producing the “original works that can found a system.”<sup>6</sup> There are many factors which go into the embrace of a course of study other than *truth*, if truth is taken as something simple and transferable which can be disencumbered from its discursive situation. This is a

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<sup>4</sup> Hutchinson, 233.

<sup>5</sup> Ibid., 86.

<sup>6</sup> Erickson, *Metafact*, 22.

history of the role which *those* factors played at the discursive root of modern science. Thus texts and even metaphysical postures are interpreted primarily in terms of their situation within a historically evolving material (and immaterial) culture, rather than on their basis in the history of philosophy as a cohesive reconstruction, and are instead approached as emerging idiosyncratically within a socio-discursive space which was saturated with ulterior motives (most of which, it will be argued, were self-preservative.)

In light of this relationship with the documentary evidence, as directed towards an understanding of the institution of attributing forefathers to intellectual modernity, there is one historical interface which appears most crucial: that between the men said to have founded modern philosophy and modern science, René Descartes and Isaac Newton respectively. That division of the spoils of historical creation is today indelible. However, there was a time when it looked for all the world as though Descartes would be remembered as father to both. Not only was Cartesian dualism *the* metaphysical system purpose-built to ground a new universal scientific study of the world, but a few decades after Descartes' death many of the best minds in France were busily realizing that vision, expanding his doctrines in chemistry, physics, astronomy, anatomy and biology to name only the most empirical. No thinker has ever had this complete a command of the theoretical and doctrinal grounds for scientific output, apart from the millennium-long Aristotelian hegemony which Cartesianism displaced. The twist to this remarkable proliferation was that institutional Cartesianism did not see the light of day until it was on its way out. After decades of official marginalization, this worldview was given a strongly implicit place in Royal Academy of Sciences, so long as it not speak its name. The strange social postures that practitioners of the New Philosophy were required to adopt in order to thrive locates them within a broader series of developments in the bearings and manners of

French elite culture across the seventeenth century, particularly regarding how the ubiquity of the printed word should be dealt with, especially in maintaining civility through intellectual dispute.

The power that evidently stemmed from the descriptive autonomy of the (socio-discursively) Cartesianized subject was desired by the king and his ministers for their practical and technological purposes, despite being fearful of his revolutionary potential. Because the latter was conceived in theological terms, a disjunctive relationship between institutional discourses of *unambiguous condemnation* and asymmetrical and fluid norms governing socially appropriate behavior took hold. The situation was contested across the university and collegiate establishment, in the presses, and as an engagement in the early modern struggle between king and pope called Gallicanism; in these ways the conflict was always bound up in the relationship between *words* and the *truth*, and who had the power to judge between the two. Fittingly, the metaphysical nature of the miraculous Eucharistic substance was a central point of disputation, as a morally charged proving ground of the descriptive authority, but one which was becoming less meaningfully a Catholic monolith. The most successful strategy was to remain silent whenever possible. This tact was taken in the Academy, where philosophy was not disputed, and Cartesianism was not addressed, until it came time to defend itself from the outside from Newtonianism, by which time it had established institutional inertia of its own. Thus the chronological scope is fitted to giving an account of the social world that led Descartes to communicate the vision that he did, and the subsequent period of intellectual insularity under Louis XIV that allowed such a unique discourse to emerge.<sup>7</sup> The *long seventeenth century* of French Cartesianism ranges from 1598 to 1709, with the Edict of Nantes serving to mark the beginning of the intellectual “shopping period” which never materialized, and 1709 marking

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<sup>7</sup> Clarke, *Occult Powers*, 9.

both the Jesuit's settling for Cartesianism and the king's eviction of the scandalous Port-Royalist faction of the Jansenist movement.

The term *metaphysics* is used as follows in a manner which is both cavalier and anachronistic. This is done from a historiographic angle. Due to the insurmountable epistemological issues presented by the terms of Cartesian dualism, *and* the restrictions of the normative theology of the era, as well as the lack of previously established discourses of modern philosophy, the possibility of a situation of generalized metaphysical discourse was not only illusive, but actively suppressed. The norm of separation between the principles of being in theology from those of, say, optics, was the discursive situation these French philosophers were forced to contend with. Thought on the private, phenomenal nature of substance in particular could not be generalized without interfering with observation of transubstantiation. So metaphysics is used here to point to the broader kinds of discourses which rationalists tried to have, and did with some success, in which basic phenomena are described and considered for the possible structures by which they relate. This term allows for the sufficiently general consideration of how theory operates to account for some state of affairs, and how a kernel of philosophical dispute continued to announce itself, even though it was often submerged under far more pressing socio-political concerns.

Despite the polemics Cartesians directed toward the scholasticism of the descriptively powerful university system, the metaphysical horizon which appeared intuitively to even the thoroughly philosophical would not have featured many insightful theoretical structures which had not also been available to the “ancient and approved authors” whose legacy the bishopric, the parlement, and the departments and colleges of the University of Paris all saw fit to defend by explicitly *banning* the propagation of named rationalist doctrines, general perspectives,

particular theses, irreverent attitudes, and antihumanism (more on that last one) to the extent they were able, in addition to the Jesuit order's constant barrage of attacks grounded in ethical norms, condemnation by the king of France and the pope of Rome as well as the moralizing censors under both, and censure within various monastic orders, despite the fact that the so-called modernist thought which emerged during the first two-thirds of the century was, philosophically speaking, a recap of the classics. Their inheritance drew heavily on the Platonic and Neo-Platonic (and thereby Augustinian) discourses of intelligible ideals and transcendental unities, as well as Aristotelian responses dealing in seemingly equally absolute terms such as universal predication, except that they are invoked in the course analyzing what is necessary to a relationship with a particular and perhaps *describing* that state of affairs accurately in the process, rather than as a *naming* of something common to phenomena. Sensitivity to the subtle differences in the way the meaning of language is grounded by each of these metaphysical attitudes was entirely obscured by centuries of the institutionalized Thomistic reading of Aristotelian metaphysics, which emphasizes an absolute correspondence between accurate descriptions and kinds of beings (the role that ostensive or *gestural* reference plays in Aristotle's engagement of substance in categorical discourses seems to have been entirely forgotten by his scholastic adherents.) The structural role God played in not only grounding the meaning of language, but also first causes, as well as ethical virtues, certainly warranting the Bible's appearance on any list of formative and ancient metaphysical tracts. The classical toolkit is rounded out by the coherence of the abstract figures of Euclidean geometric analysis, the Archimedean infinitesimal, (the infinitely small base-unit of infinite subdivision) Epicurean atomism, (the finitely small and changeless base-unit of classical materialism) and the foundational opposition between Parmenidean beings and Heraclitean becomings. With these



they also inherited the host of traditional questions concerning the identity of part-whole relationships, the reconciliation of the infinity of time and space to the human scale, and the like.

However, the metaphysical structure which was perhaps most culturally naturalized of all these was *hylomorphism*, the Aristotelian account of substantial being as consisting of the unity of *form* and *matter*. These were regarded as being incomprehensible taken independently from one another, as unstructured matter does not exist and an immaterial substance is an absurdity. However, the theoretical severance that is called Cartesian dualism did strike most directly at the immediacy of the united being of the discernible phenomenal object and its real substrate of existence.<sup>8</sup> For better or for worse this was the truest metaphysical innovation of early modern philosophy, and which produced the possibility of a culture in which it might be said that “the senses deceive,” let alone one in which such sentiments were a tenet of orthodoxy.<sup>9</sup>

Descartes’ dualistic thesis provides an answer to a longstanding question in philosophy: what is the precise nature the relation that holds between the mental and the material? Contemporary accounts, such as Renaissance naturalism and scholastic Aristotelianism, saw the two as fundamentally inseparable, although to a greater and lesser degree respectively.<sup>10</sup> By the scholastic account, all things in the world exist as the union of an intelligible form (that which makes them what they are) and a material substrate (that which makes them tangible and consistent.) To the Cartesian, this amounts to an absurdity, being the claim that human concepts and purposes are somehow *in* the matter which is studied by physics. No, they respond, one may indeed experience things variously as *named* and *useful*, but these features of experience are no less mental than experience itself. They agree wholeheartedly with the Aristotelian view of

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<sup>8</sup> Roger Ariew, *Descartes Among the Scholastics* (Leiden: BRILL, 2011): 5.

<sup>9</sup> Desmond Clarke, *Occult Powers and Hypotheses* (Oxford: Oxford University Press, 1989): 64.

<sup>10</sup> Westfall, 28 & 29.

matter as inherently *unobservable*, but whereas the Aristotelian views matter as a component of (or at least intimately implicated by) an object of experience, Cartesian dualism is first and foremost the theoretical *isolation* of the two. And, just as for Aristotle, the relationship between form and (standard material) body also explains the possibility of a person's habitation of his or her body,hylomorphically. By rejecting Aristotelian substance ontology without a meaningful replacement, Descartes created the problem of mind-body interaction which has been with philosophy ever since.

Whereas the dominant view prior to Descartes' intervention took the substantial (for present purposes, *real unto itself*) to be as the commonsense union described, and interpreted essences to vary as widely as do things, Descartes presented a radically minimalistic ontological vision. Cartesianism holds that there are *two* substances, both *unitary* in essence. These two modes of being constitute all of reality, are *nothing like* each other, and do not depend on each other two exist.<sup>11</sup> The material substance Descartes calls *res extensa*, or the *extensive thing*, and its name already expresses most of what can be known about it. It is the dimension of infinite space and the bodies which take up various amounts of it. Of the traditional *four* causes, only the efficient cause has any place in the affairs of extended bodies in motion, as the energetic impulse produced by a collision. Only such pushes are intelligible. The other substance is *res cogitans*, the thinking thing which characteristically lacks extension, but is thoughts. The argument from *cogito ergo sum* to the substantial *thing* which is the *res cogitans* has enjoyed a long history of refutation, most famously by Kant (putting an end to the particularly early-modern style of existence questions.)<sup>12</sup> The argument was at any rate clearly motivated by a desire for *ontological parity* between the totality of intelligibles and intellection on one hand and the

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<sup>11</sup> Joseph Almog, *What am I?: Descartes and the Mind-body Problem* (Oxford: Oxford University Press, 2005): 4.

<sup>12</sup> Daniel Garber & Beatrice Longuenesse, *Kant and the Early Moderns* (Princeton: Princeton University Press, 2008): 36 & 37.

totality of movables and motion on the other. Descartes needed to present his original observation of “I think” as not grounded by a material body. By defining each so as to be wholly dissimilar, he is able to conclude that consciousness as such *cannot* be grounded materially, in virtue of the “distinctness of discernibles” principle attributed to Leibniz, and thus must exist on its own basis as substance.<sup>13</sup> The kernel of Descartes’ metaphysical work is that mind and matter are so different that nothing of the one can bear upon the other. This conclusion was motivated by a discomfort with the direct-realist view of perception, and ontologizes its inadequacy. The practical result of this was to pose the epistemological question like never before, both more emphatically yet with dramatic new restrictions.

Descartes rather infamously did not deliver an answer to the question which he posed with such intensity: how can one discover the truth of a state of affairs from nothing but appearances? He leaves his epistemological account as a sort of naive “intuitionism,” such that the interpretive truth of the “clarity and distinctness” of a phenomenon must also play the part of carrying *formal* weight, to the extent that it grounds necessary inferences about the existence of the world.<sup>14</sup> This is just one of the many theoretical puzzles which stem from this strange substance dualism, but it also invokes the nature of the broader metaphysical problem: the Cartesian subject can make use of only that which consists in finite, *temporally bound* phenomena of awareness, and on that basis alone must discover the principles of the world which are given thereby but which are not themselves bound up in that way.

Perhaps most pressing among consequences, what in the world is a Cartesian to do when in response to one's testimony concerning the distinct clarity of an experience, someone demands, “prove it”? To refuse is to do so would be a humiliating indication that the claim had

<sup>13</sup> Almog, 5.

<sup>14</sup> David Weissman, “Metaphysics.” in *Discourse on the Method: And, Meditations of First Philosophy*, Rethinking the Western Tradition, eds. David Weissman, William Theodore Bluhm (New Haven: Yale University Press, 1996): 148.

been unfounded. However, to attempt to do so would in the vast majority of cases mean to take theoretical steps beyond those attributed to Descartes, a risky proposition regardless of how modest they might seem. Taking steps towards incorporating an awareness of the role for a uniquely Cartesian basis for self-conscious anxiety into historical consciousness of these metaphysical discourses is the best preparation for the subsequent account of the socio-discursive norms active in this domain through the seventeenth century in France.

And of course, even in the face of compelling interventions by church and state which restrict an individual's behavior, human agents are not merely passively formed from without. One acts preemptively, strategically, and on the basis of expectations. Thus it should be expected that, as might be expected from any human social productions, the unfolding of Cartesian metaphysical discourses will tend in a direction which avoids running afoul of the normative pressure against *faux pas*, all else being equal. It is truly a subtle object which is sought here. The imposition of discursive boundaries, beyond which philosophical inquiry is forbidden to stray by established cultural authorities, is an interesting subject in its own right. But accepting the importance of this phenomenon of non-technical forces dictating conditions of the structure of technical discourses, a distinct question can subsequently be posed: how did technical discourses structure *themselves*, particularly considering that these evolutions were always necessarily articulated within the bounds of norms governing deviance of thought? The answer is that control of the evolution of what came to be legitimate Cartesian metaphysics immediately following the philosopher's death was held by the small group of men who also held control of his unpublished manuscripts. Authority of this sort was far more effectively grounded in appeals to social factors than theoretical ones. This authority was deployed to shape Cartesianism on the basis of a theory of *occasionalism*, which in functional terms made it a useful system for

rendering descriptions while to a great extent undermining any metaphysical basis for the possibility of theologically (and thus politically) meaningful claims. In this way, historical French Cartesianism was, as a mainstream affair, unmistakably invested in *subordinating* itself to the demands placed on it by society, while nevertheless maintaining the meaning of its kernel of independent power. In many ways, this grounds an analysis of the metaphysics of privilege.

*A disclaimer here:* there is shockingly little science in what follows if science is to be understood in modern disciplinary terms. This is despite the fact that scientific knowledge was always the goal of the new rationalist philosophies. *Science*, however, as a kind of knowledge, had been central to western intellectualism since Aristotle. The modernists did not invent any radical new taste for accuracies which had been absent. And indeed, *much* of the Cartesian science was deeply incorrect. The various positive descriptive doctrines will be mentioned as they make themselves relevant, and especially when they do so by either stemming from metaphysical allegiances or burdening the scientist in question with political obligations. The proper place for the technical aspects of this study is informed most of all by Descartes himself, who deeply opposed the distinction and even the specialization of the various disciplines of scientific study as a misrepresentation of the unity of their grounds in philosophical principles, a view which he inherited from Aristotle.<sup>15</sup> In terms of the social history of the objects of study in the natural world, Descartes entered the story immediately following the condemnation of Galileo, and formulated his outlook on that basis.<sup>16</sup>

In the interest of preparing the way, a provisional set of answers to the question posed in the title will be given, in increasing order of abstraction. Firstly, modern science needed a real father to pay the bills. Virtually everyone who appears in this story was independently wealthy

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<sup>15</sup> Clarke, *Philosophy*, 77 & 78.

<sup>16</sup> Toulmin, 130.

and many famous, and this was seen as indispensable to being the right sort of man for the job. Secondly, modern science needed a textual father-figure such as Descartes to rally around in the face of opposition and to provide an initial working orthodoxy or consensus. This is the way in which the term *founding father* is used, as the authorial unity of a body of work which created the possibility that a new descriptive discourse emerge. And lastly, modern science needed someone to model the behavior appropriate to this new domain of human activity. Someone to serve as an example of how to weigh the various demands in coping with the uncertainty of pioneering a new kind of human subjectivity, in the face of nebulous opposition. This last concern is taken up in chapter one, wherein Descartes' motivations are considered and the beginning of first published work, *Discourse on Method*, is read for its elitist thesis. This account of his guide on how to act and how to treat others, or *social Cartesianism*, will be used to inform considerations of his historical adherents, as presented in the second chapter. The ways in which they claimed both socio-political and metaphysical authority, and the way they worked to yield the same to the power that decided their fate is the primary object of that chapter, while chapter three investigates the adjustment to the legitimacy and publicity of the Academy, and how a certain set of values were reproduced through its institutions and discourses.

## Chapter One

### Coming to Terms with Paternity

The behavior that Descartes modeled for future philosopher-scientists constrained by social norms was to avoid confrontation, beg for approval, flee the country if necessary, but then when it is prudent, *press one's advantage*. This is not necessarily a bad thing, and seems to have been the only way to do what he did with as much success as he had in absolutist France. Particularly in his decision not to publish *Le Monde*, his heliocentric account of the cosmos after hearing about Galileo's treatment by the traditional authorities through the 1630s, can be seen an analogous relationship to that astronomer's fate as Aristotle expressed to Socrates, in vowing not to let Athens sin again against philosophy; the wise response may indeed be whatever sort of self-censure is necessary.<sup>17</sup> Descartes spent most of his working life abroad, visiting Denmark and Sweden, traveling through Germany and Italy, and living most of the time in the United Provinces. He returned to what would be the metropolis of his philosophical system on multiple occasions, but never to stay for long. Ultimately, though, this is not the story of his world, but the one he created.

Prior to the dissemination of Descartes' dualistic thesis and skeptical method, begun when he went to print in 1637, there was virtually no intellectual structure to speak of.<sup>18</sup> More specifically, there was still one which functioned as a political norm but which had ceased to demand the respect necessary to deserve good-faith credence. The situation created by the convergence of numerous factors destabilizing society during the first half of the seventeenth century, ranging from drought to newfound worry concerning the freedom of the will, is aptly

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<sup>17</sup> Clarke, *Philosophy*, 4.

<sup>18</sup> René Descartes, *Discourse on the Method of Rightly Conducting the Reason, and Seeking the Truth in the Sciences*, trans. J.V. (Oxford: Oxford University Press, 1850), ix.

developed by philosopher of rhetoric Stephen Toulmin, whose historical work on the evolution of early modern scientific epistemology has influenced this project a great deal.<sup>19</sup> The epistemological authority of a revealed religion and its single, unified church had been broken a century prior by the beginning of the Protestant movement, but for a time this challenge had remained doctrinal. This was intellectually harmful enough, producing “a loss of authority on every side.”<sup>20</sup> For the first time in European Christendom, theologians could “give no unanswerable arguments,” resulting in a turn toward skepticism for the intellectual elite.<sup>21</sup> The 1598 Edict of Nantes was a failed attempt to forestall social violence by guaranteeing religious toleration in France. But even if it had succeeded in preventing the politicization of conviction regarding spiritual authority, the public discursive space for “the authority of inner conviction” had been forced open by the emergence of multiple choices; thus it is no surprise that the *very nature* of this newly conceived faculty of the mind would be “also *the* central philosophical issue for Descartes.”<sup>22</sup> It was the Thirty Years War, triggered by the opportunistic involvement of the growing ecclesiastical schism in the factional politics of German princes, which destroyed any remaining explanatory power of the church as an organ of culture. It was a rather new and troubling situation that could lead anyone, let alone a Frenchman, to admit that he “could select from the crowd no one whose opinions seemed worthy of preference” as Descartes does.<sup>23</sup> At this vulnerable moment, rapid expansion of exploration and trade with cultural centers of the far east further eroded credence in medieval eurocentrism.<sup>24</sup> This conflict contextualized the

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<sup>19</sup> Stephen Toulmin, “Descartes in His Time,” in *Discourse on the Method: And, Meditations of First Philosophy, Rethinking the Western Tradition*, eds. David Weissman, William Theodore Bluhm (New Haven: Yale University Press, 1996), 121-47.

<sup>20</sup> Ibid., 123.

<sup>21</sup> Ibid., 123-24.

<sup>22</sup> Susan R. Bordo, *The Flight to Objectivity: Essays on Cartesianism & Culture* (Albany: State University of New York Press, 1987): 38.

<sup>23</sup> Descartes, 59.

<sup>24</sup> Bordo, 13.



untethered situation of the thinking public, and it was during which Descartes produced his works.<sup>25</sup>

While the political situation on the ground ripped individuals out of the comfortable context of received answers to epistemological questions and demanded that they come to a personal conclusion regarding the very nature of truth, a contrary but equally unsettling picture was emerging from the heavens. This was the mechanistic heliocentrism of Galileo, and the permanent disruption of the “snug, finite universe” that had dominated cosmology since Aristotle.<sup>26</sup> Descartes’ fascination with the possibility of an underlying structure explaining the regularities of the observable orbits predated the philosophical concerns for which he is primarily known, and only remained unpublished on the matter for the sake of maintaining public loyalty to church authority.<sup>27</sup> In fact it was in taking seriously this notion of a mechanical universe, composed of discrete parts causing reactions in one another in accordance with absolute and comprehensible laws, which drove Descartes to his famous considerations of selfhood. Toulmin argues that his path toward dualism was far less “a spontaneous product of his own self-unfolding *esprit*,” than it was “a response to problems.”<sup>28</sup> This is a concern which today attends far more closely to neurobiology than it does astrophysics, but that emerged in the seventeenth century as a picture of a totalizing order of causal relations first began to appear: if all physical events unfold as energetic interplay between entities following absolute and intelligible laws, and humans are physical entities, is one not entirely subsumed by vast cosmic forces? On its face this is a monumental question. But rather than having due time to ponder, a “state of general crisis”

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<sup>25</sup> Toulmin, “Descartes in His Time,” 121.

<sup>26</sup> Bordo, 13.

<sup>27</sup> Toulmin, “Descartes in His Time,” 130.

<sup>28</sup> *Ibid.*, 135.

*demanded that one take a stance*, not in regards to this question, but in general, with this problem calling into question the possibility of stance-taking.<sup>29</sup>

Thus the individual, perhaps no more than a clockwork automaton, was now under obligation to give an account of existence after a millenium of authority. As a point of departure in addressing this tall task, Descartes forwarded his famous conception of consciousness “as forming a distinct, immaterial, nonmechanical realm.”<sup>30</sup> Likewise will it orient a beginning here. While a great deal remained uncertain, the metaphysical severance of mind and body allowed two points of fixity moving forward: all things exist rationally, and this rationality can be represented; and that the mind exists, apart, not governed by this reductive rationality, but able to *recognize* it, if only the proper precautions are taken. The Cartesians saw both of these premises taken together as a promise “that nature is transparent to human reason,” or that objective truths of the world can turn up as such as an experience for certain people at certain times.<sup>31</sup> The ultimate goal and foundational belief about this relationship was that “man's limitless reason would eventually succeed in representing the totality of nature.”<sup>32</sup>

From the middle of the seventeenth century when Cartesianism was so taken up by discourses of natural philosophy and metaphysics as to, for a time, become almost invisible in sufficiently pragmatic and secular circles, and from the same time through to the present as a set of epistemological concerns with which every single philosophical discourse has had to cope, for better or for worse, a great deal has been said on the subject of the Cartesian legacy. Indeed, while the so-called foundationalist project in epistemology carries on in largely the same vein as Descartes began it, in which skeptical criteria of belief justification remain the primary object of

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<sup>29</sup> Ibid., 124.

<sup>30</sup> Ibid., 135.

<sup>31</sup> Richard S. Westfall, *The Construction of Modern Science: Mechanisms and Mechanics*, in *History of Science*, eds. George Basalla and William Coleman (Cambridge: Cambridge University Press, 1977): 1.

<sup>32</sup> Erickson, 78.

study, post-modern and revisionist readings of Cartesian texts also abound.<sup>33</sup> Of these latter, Susan R. Bordo provides a useful historiography, introducing key interpretations of Descartes' thought which emphasize situation within a particular "psychocultural framework."<sup>34</sup> The theme of "domination" inherent to the pursuit of a mechanically reductive cosmos has been noted by past commentators, and the driving concerns of "insecurity and uncertainty" have likewise been given historical context here and elsewhere.<sup>35</sup> Plenty has also been written regarding Descartes the scientist, and it is this that has often appeared most radical (as opposed to generally postmodern interpretations which benefitted from the support of a broader intellectual movement) against the established conventions of a "narrowly combative and unhistorical study of the philosophers of the past which has been so characteristic of recent analytic philosophy."<sup>36</sup> Desmond M. Clarke in particular has provided a thorough study of Descartes' explicitly *empirical* writings and worldview, arguing for the overhaul of his image to reflect his subordination of metaphysics to physics, and to dispel the myth that he was opposed to experimentation which has held since his lifetime.<sup>37</sup> This sort of work is directly relevant to the current undertaking, for it is an examination of what, within a discursive community utilizing Cartesian thought categories, it is *possible to claim*. But this is only half of a picture of the *savant* as socio-political subject, albeit the much better discussed one. Before building up the powerful methodological tools for which he is known, Descartes went to great lengths to set their limits, with particular attention to who may and who *must not* wield them, and how.

Interpretation of the model of subjectivity he articulates is important to the history of social differentiation, but it is only the beginning. The analysis of the Cartesian social subject will lead

<sup>33</sup> Laurence Bonjour, *The Structure of Empirical Knowledge* (Cambridge, MA: Harvard University Press, 1985).

<sup>34</sup> Bordo, 3.

<sup>35</sup> Ibid., 4.

<sup>36</sup> Desmond M. Clarke, *Descartes' Philosophy of Science*, in *Studies in Intellectual History*, ed. M. A. Stewart (University Park: The Pennsylvania State University Press, 1982): *viv*.

<sup>37</sup> Ibid., 17.

into that of its latter manifestation as expanded by the doctrine of Occasionalism, as exemplified by the work of Nicolas Malebranche. It was his followers, Cartesians engaged in mathematical analysis of mechanical relations, just as their namesake had been, who took up arms against Newtonian physics at the beginning of the eighteenth century. It is against this backdrop of socially-inscribed epistemological powers that the Newtonian mode will be juxtaposed; perhaps roughly, if scarce mention to this point is any indication, but hopefully in a manner which best illuminates for the reader *the political implications of the stylistic and thematic dissonance* between his works of natural philosophy and the French milieu with the savant enshrined at its institutional heart.

### *Cartesian bildungsroman*

Early in the first chapter of Descartes' entrance into the scrutinized world of public intellectualism, his *Discourse on the Method of Rightly Conducting the Reason, and Seeking the Truth in the Sciences*, he relates a moment of formative passage across a similar threshold. But unlike that of 1637, when he cemented the interdependence of the persona of René Descartes and the meaning of his act of writing, the threshold which can be dated to 1616 concerns the transformation of his place in the world *vis-à-vis* reading. He affirms that from childhood, he had always placed great stock in the testimony of "letters," and pursued them at the Jesuit college of La Flèche, founded just seven years before Descartes' 1610 enrollment as a welcome-back gift by a backpedaling Henri IV, who sought reconciliation with the Jesuit order which he had banished from the country in 1595 after the first Papist attempt on his life.<sup>38</sup> Jesuits and other radicalized Catholics were in no hurry to accept Henri's apology for his transgressions against the spiritual unity of the French realm, and his efforts appear to have failed given his 1611

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<sup>38</sup> Roger Ariew, *Historical Dictionary of Descartes and Cartesian Philosophy*, in *Historical dictionaries of religions, philosophies, and movements* (Lanham: Rowman & Littlefield, 2003): 1.

assassination.<sup>39</sup> A noteworthy obligation that the king included in the foundation of the school was to enshrine his heart in its chapel upon the occasion of its disuse, presumably as an expression of his legitimacy as the Catholic king of France. As a reciprocal expression of their political loyalty, the Jesuit teachers marked each anniversary with an “instructional and devotional” celebration called the *Henriade*; Descartes was present for the first of these, the enshrining of the monarchical relic.<sup>40</sup> In this light it is little surprise that the teen who watched his passionately credulous teachers honor the embodiment of political authority, whom they had *despised*, would find that “as soon as [he] had finished the entire course study, at the close of which it is customary to be admitted into the order of the learned, [he had] completely changed [his earlier] opinion”; there *was* no order, even beyond that lack which was inherent to the learning itself! Unnerved by the troubling abundance of conflicting appeals to authority which disrupted French life in his period, he “was convinced [that he] had advanced no farther in all attempts at learning, than the discovery at every turn of [his] own ignorance.”<sup>41</sup>

Of course, anyone familiar with the most widely taught pair of modern philosophical texts (*Discourse on Method* and his 1640 *Meditations on First Philosophy*) would recognize that, while written with intimately personal tone and device, references to contemporary events like this are virtually absent. This facetious presentation “merely as a history,” which is nevertheless expunged of historical detail, has aided in a long tradition of decontextualized interpretations.<sup>42</sup> However, not all details of Descartes’ personal history are omitted, and those which are included are a valuable window into the extent to which the Cartesian subject is truly intended to be universally relatable. In the passage above, Descartes presents an account of his descent into

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<sup>39</sup> Stephen Toulmin, *Cosmopolis: The Hidden Agenda of Modernity* (New York: Macmillan, Inc., 1990): 56 & 57.

<sup>40</sup> *Ibid.*, 57.

<sup>41</sup> Descartes, *Discourse*, 47 & 48.

<sup>42</sup> *Ibid.*, 47. The one exception is his presence in Germany for the war and the crowning of the Holy Roman Emperor.

uncertainty. It is fictionalized to the extent that it appears he experienced no clean break like this; therefore, the choice of when to locate his moment of doubt should be interpreted as intentional. Having incorporated all the learning of past ages, he holds the prized intellectual resources of his time. And indeed this entitles him to membership in “the order of the learned.” But it is only then, once he has demonstrated his *belonging within an elite community*, if he should choose to accept it, that he hesitates. The theme at play here is that developed through the beginning of the *Discourse on Method*, unfolding into an explicit doctrine of intellectual exclusivity on the basis of class-bound resources which is made sure to be in place *prior* to the philosophical work of the tract beginning in earnest.

The opening line of the *Discourse on Method* is an affirmation that “good sense” is “the most equally distributed” of all human virtues.<sup>43</sup> This may seem an odd start given the suggestion that he ultimately restricts who may utilize “that alone which constitutes us men,” and of those who may, how.<sup>44</sup> What he expresses is that it is not in terms of the nature of the faculty itself that the savant is distinguished from the general population, and this serves an important role in the development of the metaphysical basis of the “community of equals” ideal: namely, that those who are ultimately inducted into the full meaning of Cartesian subjectivity definitely possess “the power of judging aright and of distinguishing truth from error,” for it “is by nature equal in all men.”<sup>45</sup> Insofar as it is an innate faculty, reason does not vary by degree. This means that when the work of Cartesian intellectuals does get under way, there is no room to call into question an adversary’s access to intellection itself as an explanation for disagreement. The most one could do to insult a peer would be to call them misled, which is to say that they “conduct [their] thoughts along different ways, and do not fix [their] attention on the same objects,” an

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<sup>43</sup> Ibid., 45.

<sup>44</sup> Ibid., 46.

<sup>45</sup> Ibid., 45.

assertion which maintains a close connection to the study at hand.<sup>46</sup> It should also be noted that these initial assurances as to the universality of reason are made in the absence of the characteristic Cartesian doubt developed a few pages later. He is merely “disposed to believe” that it is so, and interestingly, cites “the common opinion of philosophers,” that variance by degree “holds only among the *accidents*, and not among the *forms* or *natures* of *individuals* of the same *species*. ”<sup>47</sup> These philosophers are clearly Scholastics, for the terminology he attributes to them is explicitly Aristotelian. While basic Aristotelian ontological concepts do turn up here and there in modernist thought which for the most part attempted to abandon them, this passage is unique in Descartes. Alongside his plain disinterest in demonstrating this particular claim in his own rigorous terms, this brief use of a philosophical mode which he does not take seriously leads to the conclusion that the universality of reason is to be maintained on its grounds as a nicety, albeit a formal and important one. Rather than over-commit to this point, ample room is left for the individual to affirm his personal right.

The savant ideal entails not only this sort of hand-waving at the intellectual potential of the general population, but also a deep respect for the power of the individual, *as* individual. Despite his humble assurances that he “never fancied [his] mind to be in any respect more perfect,” it is Descartes’ alone which is in a position to be tested on the basis of its own merits.<sup>48</sup> He famously sets out to make himself “an object of study,” and while he claims his goal is “choosing the paths [he] ought to follow,” it is ultimately apparent that this adventurous existential objective can be at best taken metaphorically.<sup>49</sup> This is to say that he proceeds to consider which sorts of *beliefs* should be given credence, but not until after making explicitly

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<sup>46</sup> Ibid.

<sup>47</sup> Ibid., 46.

<sup>48</sup> Ibid., 46.

<sup>49</sup> Ibid., 53.

clear that there is no path open before him which leads to unconventional *actions* of social consequence. So as he praises the capacity of the insightful mind to reshape the world of understanding, he is careful to explicitly denounce any attempts to impose intellectual developments on the social world. These two arguments will be explicated successively, such as to build a picture of how hierarchical power and elite privilege are implicated at the metaphysical heart of Cartesian dualism.

One of the primary attractions of the savant is his capacity to operate as a programmatic visionary. As will be increasingly clear, the scope of this power was be closely bound by social norms, but nevertheless a certain creativity is prized. In particular “the difficulty of reaching high perfection with but the materials of others to operate on” is emphasized, revealing an unsurprising regard for the sort of whole-cloth programs in which Descartes is himself engaged.<sup>50</sup> Given Descartes’ conviction that objective truth is accessible to the perfected rationality, it follows that books of science, “composed as they are of the opinions of many different individuals massed together,” would appear “farther removed from truth than the simple inferences which a man of good sense...draws respecting the matters of his experience.”<sup>51</sup> This emphasis on expertise would be confusing if taken outside of the context of Descartes as mechanist and natural philosopher; if his project were solely an epistemological one, what object of knowledge could set two individuals apart? He says that he trusts most a man making claims “with reference to the affairs in which he is personally interested,” because the reality of his work “must presently punish him if he has judged amiss.”<sup>52</sup> This is contrasted with claims made by the “man of letters in his study, regarding speculative matters... followed by no consequences

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<sup>50</sup> Ibid., 55.

<sup>51</sup> Ibid., 55 & 56.

<sup>52</sup> Ibid., 52.



to himself,” other than to “foster his vanity.”<sup>53</sup> This comparison directly contradicts the strict (yet widespread) reading of Descartes as somehow intellectually trapped in the mode of Cartesian doubt, rather than as is revealed historically, pursuing grounds for his and others’ discoveries of natural order. While his secular philosophical posterity is generally unsatisfied by Descartes’ reaffirmation that “all the things which we clearly and distinctly conceive are true, [as being] certain only because God is or exists, and because He is a perfect being,” he himself took the matter as sufficiently settled to turn his attention to inquiry regarding the natural world.<sup>54</sup> And as an adherent to the common contemporary assumption regarding the existence of unified, authoritative truth, a preference for works “completed by a single master” is no surprise; if truth exists prior to human recognition of it, it must do so without the conceptual stitches and abrupt terminological shifts characteristic of collaborative projects, or those “upon which different hands have been employed,” and indeed, the truth itself was the product of a single master.<sup>55</sup>

It is not the proclivity towards comprehensive, programmatic thought which is odd (Descartes is himself certainly one of history’s great system-builders), but rather, the civic metaphors he deploys in conveying it. Perhaps he does so with the intention of preparing to distance himself from actual overhauling projects, for at any rate, he begins by comparing the elegance of a building designed and implemented from the ground up by a single architect with one changed over time, “making old walls serve for purposes for which they were not originally built.”<sup>56</sup> This line characterizes especially well a modernist perspective on the Scholastic tradition, then-current in the universities of Europe, insofar as it was an interpretation of Aristotelian concepts a millenium in the making, and equally “an eclectic Thomism that had

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<sup>53</sup> Ibid.

<sup>54</sup> Ibid., 80 & 81.

<sup>55</sup> Ibid., 54.

<sup>56</sup> Ibid.

weathered three centuries of commentary and criticism.”<sup>57</sup> Descartes continues to describe longstanding “ancient cities which, from being at first only villages,” have grown over the ages in such a way as to be “ill laid out compared with the regularly constructed” ones, which benefitted from being “freely planned on an open plain.”<sup>58</sup> By recognizing that the buildings of the haphazard city “often equal or surpass in beauty those of the latter,” he acknowledges the basis for attachment to the established tradition, namely the virtues of many of its works.<sup>59</sup> But the “indiscriminate juxtaposition” of buildings and “crookedness and irregularity of the streets” leads one to conclude “that chance rather than any human will guided by reason” is responsible for the structure of urban life.<sup>60</sup> This could be a description of Paris in 1637, while France as a whole is implicated in the next stage of the metaphor, which describes countries that began as “a semi-barbarous state and advanc[ed] to civilisation by slow degrees.”<sup>61</sup> In such cases, the emergence of the laws was guided “simply by experience of the hurtfulness of particular crimes and disputes,” resulting in “less perfect institutions.”<sup>62</sup> It is then, in contrasting *this* arrangement with societies bound by “the appointments of some wise legislator” that he comes dangerously close to revolutionary inference.<sup>63</sup> It is at this point that he turns away, saying “that it is not customary to pull down all the houses... but it often happens that a private individual takes down his own with the view of erecting it anew.”<sup>64</sup> Abandoning the metaphor now that he is done creeping in the direction of insubordination, he concludes that it would “be preposterous for a private individual to think of reforming a state by fundamentally changing it throughout,” with

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<sup>57</sup> Ariew, *Dictionary*, 2.

<sup>58</sup> Descartes, *Discourse*, 54.

<sup>59</sup> *Ibid.*, 55.

<sup>60</sup> *Ibid.*

<sup>61</sup> *Ibid.*

<sup>62</sup> *Ibid.*

<sup>63</sup> *Ibid.*

<sup>64</sup> *Ibid.*, 56.

the same being true for scientific curriculum.<sup>65</sup> It is only as a personal act of self-improvement that such measures are advisable. Thus, “*social Cartesianism*” would entail diligently pursuing private investigations while maintaining a submissive demeanor in regards to political concerns, for “large bodies, if once overthrown, are with great difficulty set up again... and the fall of such is always disastrous.”<sup>66</sup> And indeed, if “social Cartesianism” were in need of a pledge or mantra, “*I have never contemplated anything higher than the reformation of my own opinions*” would serve perfectly.<sup>67</sup> This mantra is also to be recognized as a *promise*, regarding not the *full* program of amelioration to power, but only the barest of minimums; opinions too can be made to fit the dictates of authority, as the Cartesians a generation after Descartes showed. The degree to which this conception of one’s appropriate place is reflected in the sociability of the Cartesians and the public space of the Academy is striking.

So far a good part of the socio-cultural balance which Descartes felt must be securely in place “before commencing to rebuild the house” has been addressed.<sup>68</sup> Rational faculties have been called universal in such a way as to extend an opportunity, while falling far short of arguing that respect should follow generally on this implicit basis. Further, Descartes argues that there are a great many improvements which rationality might uncover, but the ones which involve compelling others are too inconvenient to pursue. Instead, one should study only inner depths, or natural phenomena. A social conservative might thereby feel secure in knowing that sweeping revisions have been denounced while the way of private reflection has been left open. But what if the masses were to join together, tearing down all their own intellectual houses, acting as individuals but nevertheless creating widespread disruption? Political ethicist William Bluhm has

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<sup>65</sup> Ibid.

<sup>66</sup> Ibid., 57.

<sup>67</sup> Ibid.

<sup>68</sup> Ibid., 65.

characterized Descartes as “ambivalently egalitarian/elitist.”<sup>69</sup> The former component of this description he defends on the basis of the passage concerning the equality of good sense which has already been interpreted above as almost mockingly shallow. On this point he is entitled to his reading, but to say in support of Descartes’ elitism simply that he displays an “admiration for the preeminent mind” (he also addresses the merit of comprehensive institutions discussed previously) is to miss the far stronger cases for such a claim present in the *Discourse* alone.<sup>70</sup> When Descartes expresses outright scorn for “those restless and busy meddlers, who, called neither by birth nor fortune to take part in the management of public affairs, are yet always projecting reforms,” he gives voice to the appallingly high value he places on social rank in determining the importance of an individual opinion for a so-called rationalist.<sup>71</sup> Bluhm misses the fact that disdain for the lesser is more prevalent than is regard for the greater. To reintroduce the concern posed on behalf of a conservative elite, what is to prevent self-discovery run amok?

Descartes’ answer is straightforward: despite their alleged possession of good sense, *most people should not engage in critical thought*, and instead leave such things up to the experts. He makes it clear that he believes that philosophy is actually dangerous for them. While recognizing that those wiser than he might see a better route to certainty than Cartesian doubt, “for the many” he is far less charitable, saying that he is “much afraid lest even the present undertaking be more than they can safely venture to imitate.”<sup>72</sup> It can even inflict harm as an environmental hazard, to the extent that philosophical talk which *seems* true “commands the admiration of the more simple,” even when it is made up.<sup>73</sup> He goes as far as to assert that “the majority of men is

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<sup>69</sup> William T. Bluhm, “Political Theory and Ethics,” in *Discourse on the Method: And, Meditations of First Philosophy*, Rethinking the Western Tradition, eds. David Weissman, William Theodore Bluhm (New Haven: Yale University Press, 1996), 311.

<sup>70</sup> Ibid.

<sup>71</sup> Ibid., 57.

<sup>72</sup> Descartes, 58.

<sup>73</sup> Ibid., 49.

composed of two classes,” both of which are wholly discouraged from following after him on epistemological adventures; the first of these contains the overly confident, who are “precipitate in their judgments and want the patience requisite for orderly and circumspect thinking,” and will lose their bearings and with them all practicality if they begin to doubt, whereas the latter class consists “of those who, possessed of sufficient sense or modesty to determine that there are others who excel them in the power of discriminating between truth and error, and by whom they may be instructed,” already do well by accepting philosophical authority.<sup>74</sup> This categorization of “the majority of men” as, philosophically speaking, being one of either drones or disciples, is of untold significance for the culture of thought which has followed the Cartesian example. This insult of this condemnation is thought to be lessened, perhaps, by his claim that he too would have lived out his life as a disciple if he had “never known the diversities of opinion... among men of the greatest learning,” or if he had found the “one master” he earlier pursued.<sup>75</sup> And while the disputatious nature of the intellectual tradition to which Descartes is heir robbed him of this “one master” in his own life, he is given potentiality as an archetype in the discussion of cultural situation which marks the culmination of the socio-cultural introductory remarks of the work, as well as the cultural attitude of the scientific project to the present day.

Descartes relates the diversity of philosophies inherited from Antiquity with the variety of cultures entering European consciousness at the time, some of which appeared “decidedly repugnant” from the continental perspective, but whose adherents ought not be labeled as “barbarians and savages.”<sup>76</sup> While this seems a positive step on its own, it is the first in establishing a disingenuous, western approach to multiculturalism which in many regards structures the intellectual landscape of imperial relations. He yields a certain autonomy to

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<sup>74</sup> Ibid., 58.

<sup>75</sup> Ibid.

<sup>76</sup> Ibid., 59.

encultured modes of experience. The opportunity for him to do so has been discussed historically as fairly new in Descartes time, when the “neutral, unbiased, ‘Archimedean’ view” had been so undermined as to spur admission of “the inescapable locatedness of ideas.”<sup>77</sup> This takes the form of a statement contrasting “the very different character” of a person “with the same mind originally,” raised either “from infancy in France or Germany,” or “among the Chinese or with savages,” on the basis of which it is concluded “that the ground of our opinions is far more custom and example than any certain knowledge.”<sup>78</sup> This is to say that *all* culturally bound viewpoints are to be expunged in the task of pursuing truth. Those who are for *whatever reason* unwilling or unable to explicitly distance themselves from the “many errors powerful enough to darken [their] Natural Intelligence,” they are prevented “from listening to Reason.”<sup>79</sup> The cultural norm articulated here, which soon finds expression as the “impersonal and univocal” style of academic writing, is the establishment of detachment from worldly affairs, which has *always* signified economic privilege, as *the* factor determining intellectual franchise.<sup>80</sup> And while the implications of such a policy are vast and will be discussed further, it might at least have aspired to a kind of fairness if Descartes did not also write that, insofar as one must continue to act in the absence of convictions, his best option was to emulate “the most judicious; and although there are some perhaps among the Persians and Chinese” who equalled the wisdom of the best among his own people, “expediency seemed to dictate that [he] should regulate [his] practice conformably to the opinions of those with whom [he] should have to live.”<sup>81</sup> This includes, naturally, explicit recognition of the force “binding the parties to persevere,” of legal contracts “for the security of commerce,” which he views as a measure “against the instability of men of

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<sup>77</sup> Bordo, 69.

<sup>78</sup> Descartes, 59.

<sup>79</sup> Ibid., 53.

<sup>80</sup> Lars O. Erickson, *Metafact: Essayistic Science in Eighteenth-Century France*, in *North Carolina Studies in the Romance Languages and Literatures* (Chapel Hill: University of North Carolina Press, 2004): 13.

<sup>81</sup> Descartes, 66.

feeble resolution.”<sup>82</sup> That Descartes would go as far as to say that the legitimacy of law enforcement and the profit motive is so secure as to be *beyond any critical reflection*, even in the context of a thought experiment, should be taken as indicative of his priorities. This bold decision to continue being French as a pretense appears as an item in his “provisory code of Morals,” a structure addressing his need to “be furnished with some other house in which [to] live commodiously during the operations.”<sup>83</sup> In respect for the metaphor, it must be acknowledged that some manner of laundering scheme is operating from the back door of Descartes’ second property. His justification for the entire code is the same necessity of avoiding being irresolute that he cites frequently, while to do so constitutes his second maxim. The third is “to conquer [himself] rather than fortune,” meaning generally that “there is nothing absolutely in our power,” a truth which is shortly recommended as a therapeutic response to the “regret [for] the absence of such goods as seem due to our birth.”<sup>84</sup> This consciousness is that to which he attributes the capacity of ancient philosophers “to rise superior to the influence of fortune.”<sup>85</sup> By this he means a mere disinterest in the *further* accumulation of wealth; if the present narrative indicates anything it should be the degree to which the influence of fortune is naturalized as the necessary condition of critical thought itself and thereby rendered invisible, not to be overcome but rather passed over uncritically as the norm among those who sit at the table of rational subjectivity.

If one restricts “method” to mean actionable *metaphysical program*, then it is quite fair to say that the *Discourse on Method* “gives the reader only brief hints of what that method is, four brief, vague, and unimpressive rules.”<sup>86</sup> But considering the extensive discoursing done to

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<sup>82</sup> Ibid.

<sup>83</sup> Ibid., 65.

<sup>84</sup> Ibid., 68.

<sup>85</sup> Ibid.

<sup>86</sup> Daniel Garber, *Descartes Embodied: Reading Cartesian Philosophy through Cartesian Science* (Cambridge: Cambridge University Press, 2001): 33.

explain a method of rejecting nine out of ten of the minds which Descartes has nevertheless called inherently capable of insight, on a *pre-theoretical basis*, or, as an explicit *prelude* to the metaphysical considerations, it appears the true method may be one which has escaped critical attention within patriarchal institutions of intellectual authority. By *privatizing and individuating* the possibility of any manifestation of reality, Descartes introduced an uncanny element of *plausible deniability* into every discourse concerning a common object, and every generalized claim. What quickly became no less than a discursively enforced norm of *epistemological solipsism* among a small group, but held an unspeakable appeal for countless other men of a particularly urban professional nature.

### *Descartes' Sword of Damocles*

To say that “scientific knowledge is characterised by certainty rather than by absolute truth,” or that it fundamentally consists of distinct notions or accurate states of awareness, is simply to say that one is thinking about it, following through, and arriving at some justification for holding it.<sup>87</sup> This is a structural feature of Cartesian dualism which necessitates that the epistemological role of Cartesian rationalism be only transitional, as the very production of a rational explanation means to account for some phenomenon in more comprehensive terms. Scientific knowledge itself is not absolute, but its grounds in human experience should strive to be universal and certain. The autonomous *cogito* is at best a means of discovering the possibilities of certain grounds for knowledge, but Descartes' epistemological intuitionism fell well short of making full use of that.

It just so happens that there is a *very* good reason beyond simple embarrassment for which a Cartesian (or at least Descartes himself) should want an epistemological peg on which to hang his hat. Despite his lack of such a peg, Descartes nevertheless felt so strongly about the

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<sup>87</sup> Clarke, *Philosophy*, 135.



integrity of his foundationalism as the condition for the possibility of a “deductive unity of science” that, in a 1639 letter to Marin Mersenne, father of modern acoustics and fellow graduate from La Flèche, he requested that *his own* discourse be held to an inviolably high standard.<sup>88</sup> This elective, *one strike you're out* policy which relates error to subsequent theoretical disgrace could best be called *Descartes' Ultimatum*, and was expressed as the desire that, if it were ever discovered that what he “had written on [blood circulation], or on refraction, or on any other topic which [he had] dealt with in more than three lines.... [but which] turns out to be false, then the rest of [his] Philosophy is worthless” as well.<sup>89</sup> As no adequate explanation is available for the choice to truly take on this responsibility in earnest, there are a few relevant conclusions which can be drawn about Descartes and Cartesianism. One is that it was undoubtedly on purpose that Descartes did not go around making similar challenges and including them in the preface to his books. Instead, it seems as though he had been showing off to Mersenne. X : finish

Having indicated at length that, yes, René Descartes incorporates from the outset of his philosophical agenda an entitlement to dominate the discourses concerning the perspectives and worth of the weak and voiceless for much the same set of reasons that men of authority are widely known to make use, the original connection of this hegemonic elitism to a vision of knowledge grounded individualistically must be renewed. When Descartes argues that “a plurality of suffrages is no guarantee of truth where it is at all of difficult discovery,” and that even knowing the extent to which customary belief distorts one’s apprehension of truth, he *still* asserts that “it is much more likely that it will be found by one than by many,” it is clear that he is advocating for a world of inequity and disenfranchisement.<sup>90</sup> But this should also be tempered by the recognition that truth as he understood it could potentially be disclosed absolutely,

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<sup>88</sup> Ibid., 84

<sup>89</sup> Ibid.

<sup>90</sup> Ibid., 59.

depending on the truth in question. Certain basic realities the mind can “know pre-reflexively, via internal awareness.”<sup>91</sup> While most of the facts of which one is generally considered confident, such as the natures of the particulars in the world, fall well short of this, the standard of knowing as an absolute transparency before a comprehending mind looms as that against which potential knowledge is measured. Knowledge “about the sameness and difference of meaning” is a good general example of something indubitable, for it is precisely what is considered *transparent* to reason.<sup>92</sup> The view is that knowledge takes objects; not the materiality of things in the so-called “external world,” which one can never grasp directly, but rather, intelligible principles which one apprehends by understanding them fully.<sup>93</sup> So when Descartes attributes the diversity of opinions among the learned to the fact that they “conduct [their] thoughts along different ways, and do not fix [their] attention on the same objects,” he means that there is some fundamental, *formal* difference in how truth is reflected in these various minds.<sup>94</sup> This is justified by the theoretical principle that, as Desmond Clarke writes, “we have certain innate ideas or simple natures which constitute the basic explanatory conceptual framework of science.”<sup>95</sup> These are precisely the basic and certain truths mentioned above. But while it is nevertheless Clarke’s conviction that Descartes presents a functional account of scientifically valid knowledge, insofar as these innate ideas only exist prior to sense experience as the form of *potential* understanding, the inclusion of a Cartesian faculty of intuition which “is a kind of seeing with the mind’s eye,” would be taken by many 21st century philosophers of science as insufficient grounds for anything that would ultimately be called empirical truth.<sup>96</sup> However, this longstanding view that Descartes

<sup>91</sup> John F. Post, “Epistemology,” in *Discourse on the Method: And, Meditations of First Philosophy*, Rethinking the Western Tradition, eds. David Weissman, William Theodore Bluhm (New Haven: Yale University Press, 1996), 237.

<sup>92</sup> Ibid.

<sup>93</sup> Clarke, *Philosophy*, 58.

<sup>94</sup> Descartes., 45. This assumes they are indeed pointing their telescopes at the same star, or something to that effect.

<sup>95</sup> Clarke, *Philosophy*, 48.

<sup>96</sup> Ibid., 58.

“undervalues the significance of empirical evidence” requires the conflation of *understanding* with *proof*, and is entirely put to rest by Clarke’s historical work.<sup>97</sup> For present purposes the fact that Cartesianism was simply called the “New Philosophy,” of the sort from which new mechanical sciences of nature were liable to emerge.<sup>98</sup>

The capacity of discovery called “*intuitus* is equated with [the] clear and distinct perception” which appears throughout Descartes’ works as the primary activity associated with coming to know.<sup>99</sup> That it is specifically *ideas* which are gained in this manner is Descartes’ most directly Platonic structure, for at the time of his writing the word was only used in a philosophically technical way the works of Plato, as the direct adaptation of the word Plato used for his Forms into Latin, without any precedent of scholastic usage; Descartes even went so far as to tell Hobbes that he chose it “to refer to the forms of perception belonging to the divine mind” of Saint Augustine’s Neo-Platonic Godhead.<sup>100</sup> This entails the ideal existence of an object understood when a phenomenon is recognized correctly, and indeed the word *idea* is used to indicate an ideal archetype, but is rooted in an etymological root for *vision*; an associated metaphorical meaning of vision in this sense was the apprehension of a *seeming* which was regarded as more truly seeing than seeing. Regardless of how seriously Descartes took this Augustinian characterization of his metaphysics in passing, it would subsequently cast the Malebranchean epistemology (which is very much like this) in an authoritative light. “Simple natures” are a name Descartes calls the basic ideas which are deployed by the subject in *representing* the knowledge of more complex ideas to itself, in such a way that is integral to

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<sup>97</sup> Ibid., 17.

<sup>98</sup> Suzanne Le-May Sheffield, *Women and Science: Social Impact and Interaction*, in *Science and Society* (Santa Barbara: ABC-CLIO, 2004): 3.

<sup>99</sup> Clarke, *Philosophy*, 59. At first it had appeared that the likeliest antagonist to Clarke’s project of presenting an empirically valid rationalism would be smug Hume scholars; now the jealous Kantian seems are far more likely.

<sup>100</sup> Ariew, 101-02.

understanding.<sup>101</sup> Thus not only does he endorse the existence of an *object* of knowledge (an idea) which is intuited, differences of which can account for differing opinions altogether, he also postulates a particular *subject* of knowledge, which is responsible for comprehension and which can produce differing accounts of the same reality. Any scientific theory understood in a Cartesian context is a rational construction of a truth which emerged first as “a stream of consciousness” within the experience of a particular mind.<sup>102</sup> All possible facts are bound up temporally in this way. When it is said that Descartes separated the mind from the body and the natural world, this does not yet mean that representations of natural law were in any way considered separate from the mind. Rather, Cartesian rationalism is in many regards understood in the most metaphysically authentic manner when an ambiguously Platonic, *comprehensive gaze* is permitted yet the ontological independence of *res cogitans* is also respected. It is not unlikely that metaphysical ambiguities of this sort were played out in the Cartesian's favor more often than not.

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<sup>101</sup> Ibid., 55.

<sup>102</sup> Bordo, 17.

## Chapter Two

### Testifying and Bearing Witness

Descartes gave the intellectual *avant garde* of the mid-seventeenth century, abandoned as it had been between the nominal multiculturalism of 1598 and the “rocks of intolerance onto which [the European social order] relentlessly drove after 1610,” a metaphysical anchorage; the doctrine of the incommensurable *res cogitans* was that to which would-be rationalists would hold through the “political, social, and theological chaos embodied in the Thirty Years’ War.”<sup>103</sup> Less a tradition than a disparate proclivity with its roots in Platonism, rationalism is an approach which prioritizes phenomena of understanding when giving philosophical explanations of the possibility, quality, and content of knowledge. The unifying feature and the aspect which is most relevant to present purposes is that “epistemological distinctions are grounded in ontological distinctions.”<sup>104</sup> The central distinction for Descartes was between the immaterial mind and the mechanistic body, one which held such appeal “that there was hardly any natural philosopher of that era in France” who did not take Cartesian dualism, if not thoroughly then as a methodological aspiration.<sup>105</sup> The labels “rationalism” and “Cartesianism” are often used interchangeably in the context of early modern thought, and while this is inappropriate generally speaking, it is vastly less so when referring to those who saw the natural world as intelligible and sought to decipher it. “Virtually every scientist of importance” took the dualistic view in the years around the creation of the *Académie*, and they did so for the same reasons that motivated Descartes: with all appearances held apart from that which is conscious of them, any truth

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<sup>103</sup> Toulmin, 70.

<sup>104</sup> Thomas M. Lennon & Shannon Dea, “Continental Rationalism”, *The Stanford Encyclopedia of Philosophy* ed. Edward N. Zalta (Spring 2014 Edition). This is identified as the “important point” characterizing all rationalisms.

<sup>105</sup> Clarke, *Occult Powers*, 17.

discovered thereby is *objective*, or such as reveals the exact nature of some indisputable entity, without the ambiguity characteristic of a mystified subject.<sup>106</sup> Yet as will be seen, a newfound possibility is not the same thing as a system or method. Descartes never found any rational feature in the world of perception which validated “itself in terms of correspondence with reality,” and thus left none to his successors.<sup>107</sup> The result of this was that any positive claim about the sorts of natural phenomena which science studies carried an unavoidable burden of truth. The most one could say was that he was personally convinced by the clarity of his insight, and explain his reasons. Ultimately, the independence of the *cogito* which made it an important new ground for truth also made it incommunicable as such, requiring one to *take a stand* epistemologically, and to do so alone. This is, then, an investigation of the pre-theoretical social reality which stood around and between the subjects of the Cartesian reduction, or, the enmeshment of the truth-claimant *cogito* within a particular sociable subject. This is thus an entry in the tradition of histories of the interaction between ideological structures and the community identities of those who adopt them, albeit one concerning an austere metaphysical system.

A necessary structure of human existence (the *awareness-of*, and its two component features) was distinguished in the midst of a socio-political crisis, and was put to political ends on the same basis. The latter of these claims is informed by the historical facts concerning the strict engagement with this radically reductive metaphysical claim, and the play of power both within and beyond the discourses which took orientation from it, and will be substantiated by what follows. But regarding the former, the analysis is limited to this unsubstantiated principle of intellectual history: that which appears to intuition will always be the *true* out of all which one is

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<sup>106</sup> Richard S. Westfall, *The Construction of Modern Science: Mechanisms and Mechanics* (Cambridge: Cambridge University Press, 1977): 31.

<sup>107</sup> Bordo, 25.

*positioned to recognize intuitively.* This is meant to apply generally, but especially to the Cartesian case, wherein the philosophical contours were (to the wisdom that comes with detachment, ironically) so evidently responsive to the situation of the day, despite adamant denial of this well into the twentieth century. The declaration of a structurally unsituated basis of epistemic authority, when in the face of the ruptured authority of the situating epistemology, can be seen as no coincidence.

*discourse of illegitimacy*

Despite the demise of the explanatory power of the most traditional theological doctrines, such that many among the learned came to view “church affiliation [as merely] a cultural practice,” political institutions persisted in holding power over people and ideas, and continued to cite spiritual authority for justification of its existence.<sup>108</sup> This required preserving the legitimacy of the intellectual tradition which underpinned it, made all the more crucial by the nominal cession of the ecclesiastical monopoly over the French population. The period of the Thirty Years War and the reign of Louis XIV witnessed collaboration between sacred and temporal powers to label and marginalize subversive social elements on the Medieval model, but with a uniquely modern concern for the institutional knowledge system which functioned as the “pillar of an established order” itself, rather than being a reflection of a perhaps pre-1598 cultural hegemony legitimizing both.<sup>109</sup>

This modern relationship was inaugurated in 1624, when the Theology Faculty of Paris recommended a drastic new limit on the right of opinion and discussion which extended well beyond religious conviction. The parlement of Paris enacted their request, banning the “holding or teaching [of] any theses contrary to the ancient and approved authors,” with capital

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<sup>108</sup> Toulmin, 124.

<sup>109</sup> Clarke, *Occult Powers*, 35.

punishment a potential consequence of doing so.<sup>110</sup> This legislation would today be dubbed the “*Aristotle Protection Act*,” insofar as he was precisely the ancient and approved author they sought to protect. By no means a Christian himself, those who populated the universities were, and the knowledge of all subjects imparted there was formulated in terms of his mode of categorical substantialism. But not only was their corpus dependent on an entrenched classificatory system, components of that system were actually necessitated by the demands of articles of faith. The instance of this which was most prominent on philosophical minds was the theoretical implications which had accumulated in the schools concerning the Council of Trent’s ruling on the metaphysics of the Eucharist. Theologians “interpreted the Tridentine formula as if it had endorsed a theory of [Aristotelian] substances and accidents,” particularly one which allowed the full gamut of properties of something to remain unchanged, (seeming like bread, the experience of it being wine) yet nevertheless for the thing-itself to become different (genuinely divine body, actually miraculous blood).<sup>111</sup> It was explained that the manifest properties were inessential to the nature of the substance, rendering appearances and things *theoretically autonomous*. “Manifest” is used here as a scholastic technical term, the opposite of which was *occult*, describing properties which definitionally were in no way evident.<sup>112</sup> The evolution of this concept under Cartesian use is a central indication of their collective impulse to minimize theoretical vulnerability.

True to seventeenth century form, this project of inventing science was surrounded by and engaged with a complicated ideological terrain of spiritual innovation and monastic initiatives, such that formative roles were played by the Jesuits, Oratorians, Benedictines, and

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<sup>110</sup> Ibid., 11 & 12.

<sup>111</sup> Ibid., 23 & 24.

<sup>112</sup> Keith Hutchinson, “What Happened to Occult Qualities in the Scientific Revolution?” *Isis* 73, no. 2 (University of Chicago Press, 1982): 234.



even Cistercians of a radicalized abbey in Paris. The Jesuits were a relatively new order dedicated to a positive, politicized and polemical program of “traditionalist pedagogy,” and the Oratorians were exactly their opposite.<sup>113</sup> Both viewed their central work to be education, but whereas the Jesuits were concerned with delineating deviance, which in this context meant drawing out theoretical similarities to the Protestant heresy of John Calvin or the rationalist monist heresy of Baruch Spinoza, the Oratorians were interested in teaching the new developments in mathematics and philosophy in the growing number of colleges they controlled. Founded that very century, the Oratorians rejected structural constraints of many kinds, including the scholasticism of the Jesuits and even the taking of vows.<sup>114</sup> These were the two institutions operating the largest share of the private colleges in which philosophical education took place, (as opposed to the increasingly detached and authoritative universities) and both orders necessarily forbade teaching Descartes.<sup>115</sup> But while Oratorian professors got away with doing so anyway, Jesuits who so much as dabbled were sent away on missionary work.<sup>116</sup> The most radicalized Jesuit college was Descartes alma mater La Flèche, which certainly had something to do with the relationship enshrined by the *Henriade*.<sup>117</sup> The third major player was the neo-Augustinian movement known as Jansenism. Inspired by a posthumous work titled *Augustinus*, published the same year as Descartes’ *Meditations*, it was in many interesting ways the ethical-existential counterpart to Cartesian ontology and epistemology, including its clandestine following.<sup>118</sup> It was the Cartesians who were seen as sharing a “belief in the authority of human reason” with the Jansenists and not the other way around, and indeed, the theoretical possibility

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<sup>113</sup> Clarke, *Occult Powers*, 20.

<sup>114</sup> J.B. Shank, 39.

<sup>115</sup> Clarke, *Occult Powers*, 15 & 16.

<sup>116</sup> *Ibid.*, 6. Denis Mesland will come up again as the Jesuit who drew Descartes into giving an account of the Eucharist.

<sup>117</sup> *Ibid.*, 20.

<sup>118</sup> Tad M. Schmaltz, *Radical Cartesianism: The French Reception of Descartes* (Cambridge: Cambridge University Press, 2002): 43.

of legitimate civil disobedience was unavoidable for them, while Descartes avoided it just fine.<sup>119</sup> The view was that salvation is not itself a choice, as the Jesuits maintained, but irresistible for those who have achieved it; while not immediately intuitive as a *promotion* for the reasoning subject, what Jansen offered was a theory of agency which located the intervention of divine grace ontologically prior to, or *beyond the jurisdiction of*, rationality and will in a way that cast human freedom in an entirely different light. In many regards it was yet another subversive theological movement which emphasized transformative election in the context of theories questioning the possibility of authorities of any kind to come before God, with the particular epistemological emphasis on “the human spirit’s efforts to decide which facts to believe” being a reflection of the concerns of the day.<sup>120</sup> The movement was centered on Port-Royal Abbey in Paris, which was forcefully evicted in 1709.<sup>121</sup> The male Jansenists at Port-Royal were called “solitaires,” among whom Antoine Arnauld and Pierre Nicole were also prominent Cartesians.<sup>122</sup> The overwhelming complexity and long term of the scandal is attributable to the political maneuvering between king and pope in that period, such that when Jansenism was mutually targeted it was as a show of solidarity, despite the fact that “the Papacy and the king [did so] for different reasons.”<sup>123</sup> What matters is that this movement was so closely associated with Cartesianism (for reasons both ideological and circumstantial) that, especially during the decade from 1669 when Clement IX commanded critique of Jansenism to stop to when that policy had effectively eroded, “an anti-Jansenist animus” was expressed through attacks on Cartesianism.<sup>124</sup> They were bound together by the controversy over the Eucharist.

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<sup>119</sup> Clarke, *Occult Powers*, 33 & 34.

<sup>120</sup> Ibid.

<sup>121</sup> That this was the same year the Jesuit order endorsed Descartes is at most a partial coincidence.

<sup>122</sup> Schmaltz, 45.

<sup>123</sup> Clarke, *Occult Powers*, 32.

<sup>124</sup> Schmaltz, 69.

The scholastic tradition, so-called historically in reference to its authoritative position in the schools, understood thinking and learning in terms of logical principles of formalized inference, particularly syllogism. Descartes felt the common dissatisfaction with such a preoccupation, to the effect that syllogistic logic is merely a standardized form for expressing what one already knows.<sup>125</sup> And while he was certainly on to something, it was his interest in expressing something *new* which cast such inferential discourses in a negative light. The scholastic curriculum included no such method of discovery beyond the bounds of what was already affirmed as true, and certainly made no pretense to ever operate in the absence of established fact. This epistemological contrariety, along with the legal authority delegated to the Sorbonne regarding the matter, is no doubt what led Descartes to dedicate *Meditations on First Philosophy* to the same Faculty in 1641, and bearing the subtitle “in which the existence of God and the immortality of the soul are demonstrated.” He affirms his fear of God on all counts, but also sees his position as sufficiently weak as to necessitate the somewhat ludicrous cover story that it is his aim to convince the faithless of God’s existence, because the faith-based “argument cannot be put to unbelievers because they would judge it to be circular.”<sup>126</sup> Despite his demonstrations of proper spiritual socialization and the excuse of validating divine truth by “philosophy rather than theology,” Descartes’ work did not receive the approval he requested.<sup>127</sup>

It was not until 1663, thirteen years after their author’s death and two after Louis XIV assumed full rule of France, that the Church in Rome put Descartes’ works on the Index of Prohibited Books.<sup>128</sup> While this means that all good Catholics were under moral obligation to avoid any contact with the central texts of Cartesianism, the fact that they were not subsequently

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<sup>125</sup> Clarke, *Philosophy*, 64.

<sup>126</sup> René Descartes, *Meditations on First Philosophy: With Selections from the Objections and Replies*, trans. John Cottingham (Cambridge: Cambridge University Press, 1996): 3.

<sup>127</sup> *Ibid.*, 3-5.

<sup>128</sup> Clarke, *Occult Powers*, 11.

censored under French law presented an ambiguous situation which only became more so. In the decades to come, the power to suppress discourse and compel cultural norms was enacted variously by the ecclesiastical, monastic, and monarchical institutions which held it, but never in a way which was total. Cartesians were not hounded or drawn out of hiding; the extent of their vulnerability was elective. Two periods of escalating repercussions (the first from 1671-72 and the latter 1689-92) culminated in the king directing the University of Paris to condemn the teaching of certain Cartesian ideas.<sup>129</sup> These controversies found Robert Desgabets and respectively, his colleague Pierre Sylvain Régis, the sub-tradition composed of whom Tad M. Schmaltz characterizes as “radical Cartesianism,” as the primary recipients of official censure.<sup>130</sup> These affairs and the vast political consequences of indiscretion by Cartesians will be discussed in connection with the progression towards institutional legitimacy.

While the theological basis for political legitimacy remained grounded in the presumption of the truth of university dogma, Louis XIV and his finance minister Jean-Baptiste Colbert had become aware of the potential for power which lay in the new mode of inquiry. It was with the aim of encouraging “technologically productive” works, particularly those with *economic or military* applications, and in so doing accruing glory to the king, that the French Royal Academy of Sciences was founded in 1666.<sup>131</sup> This first generation of the Academy was given no legal basis and instead relied on maintaining a close relationship of patronage within Colbert's inner circle. Two of his parliamentary subordinates started printing the *Journal des sçavans* in 1665, and of whom it was Jean Gallois who gained control of it in 1666 and was brought into a leadership position in the Academy by Colbert two years later.<sup>132</sup> It was in that

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<sup>129</sup> Ibid.,: 3-9.

<sup>130</sup> Schmaltz, 17.

<sup>131</sup> Clarke, *Occult Powers*, 41.

<sup>132</sup> Sturdy, 87 & 88.

way that *sçavans* became the closest thing the early Academy had to an official periodical, despite never being bound by any institutional connection.<sup>133</sup>

Colbert's strategy was to allow neither Cartesians, *nor* partisans of scholasticism. In his attempts to create an uncontroversial academy, he took his inspiration from an unofficial Parisian academy which was formalized by Habert de Montmor and later reformed around Melchisédech Thévenot, who held themselves to “separating science as much as possible from metaphysical and religious controversies.”<sup>134</sup> This was quite a demand, given that the central metaphysical dispute in question concerned the nature and feasibility of scientific knowledge in the first place, and that the disputing parties were institutional religion and quasi-heretics. The value of *tactful silence* was paramount and unmistakable. For while open Cartesians were indeed excluded in 1666, some of the most notable inductees of that first cohort, such as Christiaan Huygens and Claude Perrault were disciples of Descartes in all but name, adopting everything from his rationalist method and perspective to his vortical physics as integral parts of their own work.<sup>135</sup> By the time of the 1699 reforms to the Academy the exclusion of Cartesians could hardly have been of much concern if Nicolas Malebranche was welcome, for he was the central figure of the explicitly Cartesian project of natural philosophy by that time.<sup>136</sup> As long as the metaphysical basis of institutional French science remained Cartesian, it did so under the Malebranchean interpretation (albeit varying by degree.) A look at how this came to be, despite the initial rejection of Malebranche’s theory of “ideas in God” by many of those properly called Cartesians, will follow a portrait of the values and expectations that characterized that community.<sup>137</sup>

#### *the social occasion*

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<sup>133</sup> Ibid.

<sup>134</sup> Clarke, *Occult Powers*, 38 & 39.

<sup>135</sup> Ibid., 17 & 42.

<sup>136</sup> Ibid., 58 & 59.

<sup>137</sup> Clarke, *Occult Powers*, 59.

Despite both death and hellfire being established as possible consequences, there were a handful of outright Cartesians in France. They were the ones who, not merely engaging in rationalist foundationalist studies of a mechanical natural world to the extent which characterizes the implicit Cartesianism of many *savants*, took it upon themselves to further develop a philosophical understanding of what constitutes justified true belief and how to get it. This entailed dialectical difference of opinion with the ontological accounts of both Renaissance naturalism and that which was maintained in the universities. Their explicit rejection of *intimate access* to objects disavowed them of the mystified epistemological resources of the former, while their polemical rejection of the latter “outmoded and intellectually disgraced authoritarian tradition” gave definition to the social situation of their own movement by contrast; unfortunately this meant that their defining feature was being *unauthoritative*, having burned all (nominal) bridges with “received wisdom.”<sup>138</sup> Typically called Cartesian skepticism, the central *rhetorical lever* which the Cartesian discourse had available is more technically “negative dogmatism,” the view that the unproven must be denied.<sup>139</sup> This all-purpose critique was never enforced universally by Descartes in his own writing, and that ambiguity was maintained by his students. It was the discursive manifestation of the incommensurability of the *cogito* with physicality, and complicated Cartesian claims to knowledge just as well as it undermined those of the “partisans of school philosophy.”<sup>140</sup> This forced an extensive relationship with the *hypothesis*, which at the time meant an unmethodical and unproven explanation of a set of phenomena, grounded only in rational conception; they found themselves stuck with a heightened knowledge of the inadequacy of such claims, but lacking significant insight into how

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<sup>138</sup> Ibid., 36.

<sup>139</sup> Toulmin, 141.

<sup>140</sup> Clarke, *Occult Powers*, 34.

to meet their own high standards.<sup>141</sup> Most of what they did accept were extensions and clarifications of Descartes' original principles, showing particular interest in delineating between what one should reasonably be expected to know, what was inaccessible, and concerning what it was appropriate to guess. The doctrine of occasionalism, the anti-occult attitude, and the discursive isolation of physics from mechanics together reveal a restrictive proceduralization of thought, as a socially explicable protective measure. That is to say, the central normative value of the early modern urban elite, namely *honorable sociability*, was served in this context of political marginalization paired with the lack of an actionable program to their benefit by the minimization of the epistemological burden on the individual, while simultaneously wielding that vulnerability against the authority of the schools to the extent that it was prudent. Conversely, "increasing one's credibility by enhancing one's social status" was important for anyone working at the metaphysical fringe who took the possibility of widespread appeal seriously.<sup>142</sup>

The most fitting date by which to mark the start of Cartesianism as identifying a community rather than just a set of ideas is 1659.<sup>143</sup> This was when Jacques Rohault, a mathematician from a wealthy merchant family, began hosting what are known in the anglophone literature as his "Wednesday conferences," opening his Paris home in the middle of every week until his death in 1672.<sup>144</sup> They were so emblematic of the rationalist spirit in France that historian of the Academy (which is to say, not a Descartes scholar) Roger Hahn presents the very same early modern period which ended violently at the Bastille as having begun comfortably at Rohault's house.<sup>145</sup> This weekly get-together, which its attendees enigmatically

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<sup>141</sup> Ibid., 131.

<sup>142</sup> Mario Biagioli, "Scientific Academies in the Seventeenth Century

<sup>143</sup> Ibid., 18.

<sup>144</sup> Ibid., 7.

<sup>145</sup> Hahn, 86.

referred to as *les mercredis des Rohault*, and which established him as the “foremost proponent” of Cartesian philosophy, can be called *the* seat of Cartesian legitimacy for multiple reasons.<sup>146</sup> Presenting “from the general principles of Cartesian physics,” to how they “provide explanations of various natural phenomena” and culminating in “experiments which confirmed the results,” Rohault set the standard of tone and style for the Cartesian project; however, to say he established the theoretical orthodoxy as well would be an overstatement, for he cautiously left all of the original conceptual ambiguities intact.<sup>147</sup> His primary philosophical contribution, which would persist as the less-than-appealing fallback position, was to “jettison much of Descartes’s metaphysical baggage” at the outset by endorsing a *probabilistic* function for hypothetical claims.<sup>148</sup> This willingness of the more physical than metaphysical Cartesians to turn the page on the foundational stage of the project (before it was finished, no less) made up the background to the positive extensions of doctrine to come, and indeed, it was the wisest course of action given the politico-spiritual demands on them all. Nevertheless, Rohault’s role in the “propagation of the new philosophy” was crucial as the first steps towards the normalized presence of non-Aristotelian thought and theoretical discourse in French society.<sup>149</sup> But this is not to say that his *mercrediste* clique was allowed to pursue their agenda in peace.

Claude Clerselier, the lawyer at the *parlement* of Paris who translated and published the official French *Meditations* in 1647 and remained in charge of the publication of Descartes’ correspondences and unfinished works, was also Rohault’s father-in-law.<sup>150</sup> Clerselier not only frequented *les mercredis* but was sufficiently involved in them to be identified as co-host by the

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<sup>146</sup> Roger Ariew et al., *The A to Z of Descartes and Cartesian Philosophy* (Lanham: Scarecrow Press, 2010): 224.

<sup>147</sup> Clarke, *Occult Powers*, 18.

<sup>148</sup> Ibid., 13.

<sup>149</sup> Sturdy, 22.

<sup>150</sup> Rebecca M. Wilkin, “Figuring the Dead Descartes: Claude Clerselier’s *Homme de René Descartes* (1664).” *Representations* 83 no. 1 (Berkeley: University of California Press, 2003): 41 & 42.



Archbishop of Paris in 1671, when he reprimanded the two men on behalf of the king as well as his bishopric.<sup>151</sup> Just as Clerselier was kept close to the action by means of the bond of his daughter's marriage, he had been connected to it in the first place by way of his own. A both professional and familial relationship with brother-in-law Hector-Pierre Chanut, the nordophile who put Descartes in touch with Queen Christina of Sweden and who persuaded him to accept an invitation to her court at Stockholm in December 1649, meant that back in Paris, Clerselier was the lucky recipient of the philosopher's invaluable literary estate when Descartes died promptly in February.<sup>152</sup> In grounding the general patterns in this period of close social relations between the intellectual and traditional elites, as well as the patriarchal emphasis placed on dynastic bonds, it is revealing and straightforward that possession of Descartes' manuscripts passed directly from the monarch of a European power to a man whom Rohault would have considered his uncle, and from there to his immediate (*née* Clerselier) family in Paris (in material terms this connection became far less straightforward when the ship from Sweden sank and Clerselier had to hire divers to recover the soaked manuscripts.)<sup>153</sup>

Other noteworthy *mercredistes* included Malebranche, Nicolas Poisson and Barnard Lamy, all three of whom were Oratorians, Huygens, Gerauld de Cordemoy, a parliamentarian with sympathies for Gassendist materialism, the disputatious Simon Foucher, the controversial Benedictine Robert Desgabets and his student Pierre Sylvain Régis, who was also "Rohault's most outstanding protégé," inheriting nominal leadership of the Wednesdays after Rohault's death.<sup>154</sup> *All but one* of the men instrumental to the development of Descartes' system attended

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<sup>151</sup> Douglas Hedley, *Platonism at the Origins of Modernity: Studies on Platonism and Early Modern Philosophy*, ed. Sarah Hutton (New York: Springer Publishing, 2007): 162.

<sup>152</sup> Roger Ariew, *Dictionary*, 10.

<sup>153</sup> Russell Shorto, *Descartes' Bones: A Skeletal History of the Conflict between Faith and Reason*

<sup>154</sup> Clarke, *Occult Powers*, 18-20. This title for the community of early participants is a coinage in the Cartesian context, although a French adventure club exists under the same name.

these meetings.<sup>155</sup> Rohault's socio-economic resources allowed a space for key figures to identify with one another in a setting of domestic hospitality, legitimated by the co-host's relationship to the master himself; and while discord within this group was as inevitable as Cartesian epistemology was ambiguous, there is no indication that Rohault's Wednesdays were anything less than serene occasions. An unmistakably elite crowd, the *mercredistes* were not only well-to-do but "interacted socially and professionally" with those sympathetic to their cause within the Academy after 1666.<sup>156</sup> Their subsequent discourse certainly would not have been such a tight-knit (and thus historically comprehensible) affair if there had not been a de facto Cartesian Society to which it could be endemic, with an uncontroversial "arbiter of Cartesian scientific affairs" at its head.<sup>157</sup> In regards to the exclusionary interpersonal considerations developed in part one, it was *exactly* the sort of situation which allowed two guarded *res cogitans* to see eye-to-eye.

Or at least they would have, if the metaphysical concern at hand had not precluded seeing eye-to-*anything*.<sup>158</sup> As the situation stood at time of the inception of the Academy, the grounds for scientific knowledge was still an open question which fell on the shoulders of the individual. But by the 1699 reformation, two positive programs had been developed, forwarded, and weathered the storm of reception. The first was *occasionalist Cartesianism*, an idealist interpretation which was championed by Malebranche, and which was undermined from the start by its similarities to Jansenism. The second was *intentionalist Cartesianism*, an insightfully modern phenomenal realism which found its most palatable expression under Régis; this is the

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<sup>155</sup> After full consideration, Antoine Arnauld is excluded from this count. Important critics (Cartesian & anti-Cartesian alike) without influential positive doctrines are not central figures in the story which ends in Academic legitimacy for Cartesianism, despite the Port-Royalists contributing in other ways.

<sup>156</sup> Ibid., 20.

<sup>157</sup> Roger Ariew, *A to Z*, 224.

<sup>158</sup> Corny and esoteric!

position Schmaltz calls “Radical Cartesianism,” which was developed by Desgabets and struggled under his inability to avoid public controversy.<sup>159</sup>

It is unclear to what extent Jansenism inspired the Cartesian concept of *occasional causation*, but the notion of God as the one true “efficient” power was definitely theirs first.<sup>160</sup> The idea is that whenever one wills to act, (particularly to serve) this comes about as something caused by God. As an expression of His love, God makes reality reflect the activities of humanity; when one does, it is by God that it is done. This line of thinking is of clear relevance to all Cartesians, who were flummoxed by the prospect of mind-body interaction. Further, in the course of the journey out of his famed radical doubt in *Meditations*, Descartes argues that because “all things depend upon Him, and that He is not a deceiver,” it can be concluded “that the certainty and truth of all knowledge depends alone on the knowledge of the true God.”<sup>161</sup> By understanding what it means for God exist, (which itself follows from understanding what it means to be God at all) Descartes explains that divine grace alone is the reason that one can trust perceptions to have *anything* to do with reality. For their to be a reality but for experience not to *track* that reality whatsoever would be cruel; this is the extent of Descartes’ metaphysical role for God in that work, as he goes on to argue from distinct ideas of entities which have been validated only indistinctly. However, evidence from his letters has been used to present the compelling argument that his occasionalism extended even further.<sup>162</sup> But in the era of secular “brain-in-a-vat” updates to Descartes’ worries, his reality-in-God argument is cast aside, perhaps fairly;

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<sup>159</sup> Schmaltz, 17. This choice of name is somewhat puzzling, as the justifications given for it apply equally to occasionalism. *Intentional* is substituted here as more philosophically descriptive and analogous to its counterpart.

<sup>160</sup> Schmaltz, 43.

<sup>161</sup> René Descartes, “Meditations on the First Philosophy in which the Existence of God and the Distinction between Mind and Body are Demonstrated,” in *Discourse on the Method: And, Meditations of First Philosophy*, Rethinking the Western Tradition, eds. David Weissman, William Theodore Bluhm (New Haven: Yale University Press, 1996): 95.

<sup>162</sup> Daniel Garber, “Descartes and Occasionalism,” in *Descartes Embodied: Reading Cartesian Philosophy through Cartesian Science* (Cambridge: Cambridge University Press, 2001).

however, the speculation that Descartes and his contemporaries would not have been genuinely convinced by such an argument is far less so. Indeed, occasionalism was precisely the attempt to *further* rely on this metaphysical role of God.

The single creatively influential Cartesian who did not attend the Wednesday's had the distinction of working even more closely with Descartes than Clerselier. Not only a graduate from La Flèche, Louis de La Forge had the honor of editing and completing Descartes' appropriately bipartite account of body and soul.<sup>163</sup> The first volume Descartes had written under the title *Traité de l'homme*, which La Forge expanded and illustrated; Clerselier wrote in the preface that La Forge, as a Cartesian medical doctor, had the unusual combination of philosophical and anatomical skills necessary for the job. The second volume Descartes had not written, so La Forge (rather boldly) projected a work of his own, *Traité de l'esprit*, as a substitute, publishing them in 1664 and 1666 respectively.<sup>164</sup> If there is any disagreement in the historical literature on Cartesianism, it concerns the identity of the orthodox position and how occasionalism factors in. However, *none* deny the orthodoxy of La Forge; even Richard Watson, whose historiography positions occasionalism and orthodoxy as opposites, claims the orthodoxy of La Forge while acknowledging that he was "at least in conversation, a complete occasionalist."<sup>165</sup> Indeed this unique unanimity is best explained by the fact that none of the historical participants questioned his credentials either. By completing Descartes unfinished project, he had the strongest claim to being his intellectual heir, winning a respect for his work which continues to shape the representation of its content. The only other uncontroversial Cartesian text would be Rohault's *Traité de physique*, published the year of his censure.<sup>166</sup>

<sup>163</sup> Clarke, *Occult Powers*, 19.

<sup>164</sup> Richard A. Watson, *The Downfall of Cartesianism 1673-1712: A Study of Epistemological Issues in Late 17th Century Cartesianism* (The Hague: Martinus Nijhoff, 1966): 71.

<sup>165</sup> *Ibid.*, 72.

<sup>166</sup> Clarke., 18.

Given that the aim of science is knowing and not doing, the context for discussing occasionalism will be restricted to “body-mind causation.”<sup>167</sup> The evidence for Jansenist similarities and the brief depiction paragraphs above regards the opposite, the capacity of thoughts like willing to bear some kind of directive relation to the corporeal human body. While La Forge took a principled stand on the occasional account in those regards also, the thrust of the Cartesian venture was not at stake.<sup>168</sup> And indeed, the asymmetrical relationship between *res cogitans* and *res extensa* meant that the receptivity of the body to (entirely commonplace) impingement by the mind was no less evident than its existence in the first place; the mind can at very least compare what it tries to do with what happens.<sup>169</sup> Body-mind causation, on the other hand, necessarily involves events off-screen. It also involves more than just the fleshly human body, which Descartes was convinced came to a point of contact with immaterial consciousness at the pineal gland, such that locomotive thought produced a characteristic wiggling, while different wiggles produced feelings.<sup>170</sup> This bizarre neuro-existential doctrine appeared in his last work, the 1649 *Passions of the Soul* and had little impact on the epistemological discussion as it applied to the objects of natural science. La Forge actively downplayed the master’s late, reconciliatory pivot to anatomy by indicating in a footnote that the way the word *idea* was used, ambiguously and in the context of the machinations of the pineal *omphalos*, is simply an instance of homophony, and *not* the shocking deathbed recantation of the regretful *res cogitans*.<sup>171</sup> The novel usage which indicates “the way in which the [animal] spirits emerge from the gland” is

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<sup>167</sup> Garber, 213.

<sup>168</sup> Ibid., 209.

<sup>169</sup> Clarke., 45 & 46.

<sup>170</sup> Garber, 145-47. Newton’s eschatology had nothing on this.

<sup>171</sup> Clarke, *Occult Powers*, 45. That the late René Descartes, *of all people*, jagged towards a theory which could fairly be interpreted as a *biologically deterministic epiphenomenalism*, and that his most uncharacteristic work and last he lived to see published was dedicated to Princess Elisabeth of Bohemia, in discourse with whom his affective thought was developed entirely, is the most interesting part of the story to be omitted in the interest of concision. For a study of Descartes as common doctrinal *father*, it need only be noted that his progeny disassociated from these vulnerable ideas.

then replaced by the term “*espèces corporelles*” in *l’esprit*.<sup>172</sup> Rebecca Wilkins notes that the images which La Forge was commissioned to produce are sterile, non-naturalistic evocations of the mechanically reductive human body, especially in comparison to those accompanying an unofficial Latin printing two years earlier.<sup>173</sup> Taking these ideas more seriously would have entailed a direct physical realism as far as perceptual experience is concerned, without any possibility for the methodological intervention of the *cogito* (at least until the tremors of the pineal gland were decoded.) This is to say, perception would be readily explicable as the phenomenon triggered by specific events in the eye, and understanding of that phenomenon would likewise consist in part of the state of the brain nearby. The exhaustive mechanical description of nature which was the pursuit of most of the Cartesians and certainly the merely de facto ones, (Rohault was archetypal) required there be only one axis of ambiguity between the relationship of phenomena to reality and the consciousness of those phenomena which seeks to represent the relationship between them. It was La Forge’s argument that “an external stimulus on sensory organs... is not, properly speaking, a sensation at all.”<sup>174</sup> This was quite true within the parameters Descartes had established in his earlier works, and clears the air for another account of correspondence.

It was in the context of this desire for methodological certainty that La Forge emphasized the “divine arrangement” that the Supreme Being maintains between stimulus and experience, such that the former lacks a causal role and is instead only an *occasion* for God to produce the latter.<sup>175</sup> Indeed, God was said to be the efficacy in all motions and changes of physical things as well, even if they weren’t in a position to occasion an eye-stimulus which was in turn an

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<sup>172</sup> Ibid. Bracketed text appears in Clarke.

<sup>173</sup> Wilkins, 41.

<sup>174</sup> Clarke, *Occult Powers*, 45.

<sup>175</sup> Ibid., 46.

occasion for a perception. While strange especially to the secular imagination, occasionalism was a way of honoring the fact that material entities themselves are very different ontologically from perceptual experiences of them. The idea of a thing is not itself that thing, nor is it a fainter manifestation of it. There is no “*rapport*” between the two, but both are creatures under the same God. By denying that appearances are in the business of representing objects, occasionalism made a paradoxical sort of progress towards a method of deriving necessary truth from phenomena, as the relationship between the two had finally been represented in terms of absolute being. However, this is also the context in which probabilistic, hypothetical representations became necessary. First utilized by La Forge and then endorsed by Rohault in his 1671 book, hypothetical explanations require that “causes conjectured are established as true by the fact that they are capable of explaining the observed phenomena.”<sup>176</sup> This is much how science would proceed in later generations. But these Cartesians were far more concerned with the full ontological implications of their claims than subsequent scientists would be, and occasionalism was there to alleviate much of this anxiety. Guessing about the reasons behind natural phenomena is less of a high-stake activity if it is already established that technically, in the most proper sense, God is the reason. Thus the task of interpreting the relations between mere appearances is *nothing more than that*. The real and independent existence of *res extensa* was bracketed and accounted for as a conceptual totality, with the divine promise that its truth was somehow implicated in a satisfying way by the subsequently safe conversations concerning appearances. Given the situation of the active policing of metaphysical principles from which the development and success of occasionalism emerged, its central claim having the direct effect of undercutting the very possibility of rational truth-claims carrying political or theological implications is strikingly evocative of Descartes’ promise in *Discourse on Method* to reject on

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<sup>176</sup> Garber, 115.

principle the enactment of any philosophies, programs or autonomous rationalities which antagonize the order of power. The historical Cartesian movement was bound between these reciprocal promises, one from God to *cogito* that his descriptions matter, and the other from *cogito* to God's representatives on earth that his descriptions don't matter *too* much.

Taken for the capacity in which it functioned as a strategic response to the socio-political burden of the new epistemology which required the individual to take a stand, occasionalism was ingenious. The pretense of the possibility of certainty which justified the whole project was maintained, while the responsibilities of the claimant were scaled back to the limits of his experience. Faith, which had been the radical *lack* of absolute control which had once cast the natural world "as a vast phantasmagory of psychic forces," was reimagined as quite the opposite: it became a doctrinal cashing-in on the universally attested greatness of God in order to control for a mystery of human existence which couldn't be worked out from the system by conventional means. It was a philosophical equivalent of the way in which the monarchy grounded its authority in the Divinity; occasionalism gives a collective *benefit of the doubt* against the likelihood that all perceptions are hallucinations, just as the elaborate legal and ecclesiastical system ruling France all implicated the same transcendental justification. The idea that early modern philosophies such as that introduced by Descartes associated "masculinity with a cleaner, purer, more objective and more disciplined epistemological relation to the world" is well established in at least a broad sense.<sup>177</sup> Insofar as this characterizes the cultural turn which Susan Bordo calls "the Cartesian masculinization of thought," occasionalism was a further development of that trend.<sup>178</sup> It must also be noted that it was specifically the masculine, dualistic rigor which brought with it a heightened vulnerability of man before his peers and the anxious politics of

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<sup>177</sup> Bordo, 105.

<sup>178</sup> Ibid., 97.



managing his stature which is explored here, and which was managed with further separateness; while the shame at being wrong is longstanding, the explicit possibility of having one's status as truth-attuned, autonomous rationality revoked is of Descartes' design. Before further discussion of the maturing sensibilities of the Cartesians, the contemporary philosophical mode which represented everything they rejected must be explored briefly to further inform their meaning of the word *occult*.

*intimacy and secret keeping*

The primordial epistemology which Bordo identifies with characterizations of “feminine consciousness,” and which takes “*sympathy*” as the means of knowing, figures as a prologue to the story of scientific worldviews, identified as *Renaissance naturalism*.<sup>179</sup> Understanding in this idiom meant “granting personal or intuitive response a positive epistemological value,” in such a way that “allows the variety of its meanings to unfold without coercion or too-focused interrogation.”<sup>180</sup> This sort of approach was taken to scientific study, which consisted of observing the *sympathies* and *antipathies* of “the occult forces of nature.”<sup>181</sup> It was thought that reason, so beloved by the Cartesians, merely “dwells on the surface”; the mind must instead “be drawn down into the deep,” such that understanding *becomes* “the form of the things intelligible... [and] for a moment is made (as it were) the intelligible thing itself.” The same objects which are so remote from Cartesian apprehension “seem to talk without words.”<sup>182</sup> As an account of the phenomenon of understanding this is less strange than it at first appears, and indeed looks very much like an overexcited rediscovery of Plato. As an approach to systematic, reductive delineation of necessary features of the world it leaves a good deal to be desired, and

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<sup>179</sup> Ibid., 102.

<sup>180</sup> Ibid., 103.

<sup>181</sup> Westfall, 28.

<sup>182</sup> Ibid., 29.

seems to have allowed a healthy bit of whimsy into the thought of Jan Baptist van Helmont, the last major proponent to be publishing throughout Descartes' life, who explained that blood of the slain "boils in rage" in the presence of the murderer.<sup>183</sup> There was none of the same trepidation over being proven wrong, (a creative guy like van Helmont must have been called out plenty) nor the same opposition between an independent, comprehensive appreciation of all phenomena on the one hand, and the "lifeless field [consisting of] only the brute blows of inert chunks of matter," or *res extensa*, on the other.<sup>184</sup> Not only were points of contact between the material and the spiritual not restricted to the pineal gland, they were everywhere.

How would someone be perceived who explains the world in such necrotic terms, and who claims such unassailable mastery for themselves? In the 1693 Jesuit commentary *Nouvelles difficultez*, the devitalization on one side and the perception of a certain arrogance on the other again seem to be connected, when the disrespect of denying animals souls is explained through a body-swap story in which a dog is baffled by the "unintelligible chatter of philosophers."<sup>185</sup> Cartesians who were more sensitive to the shame involved allowed the presence of a vital principle in animals, (most notable of these was Fontenelle, no doubt in relation to his scrutinized position within the Academy) but those who remained adamant mechanists did so on principle of their *broad*er rejection of substantial forms, the Aristotelian concept allowing there to be *any* qualities endemic to bodies themselves.<sup>186</sup> This included the human soul, and Cartesians were seen as rejecting those as well, which Descartes denied on the basis of the dogmatic truth of its immortality.<sup>187</sup> This wasn't just getting drawn into the theology of the Eucharist on a technicality, it was a flat-out denial of the *very human embodiment* which God on

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<sup>183</sup> Ibid.,.

<sup>184</sup> Ibid., 31.

<sup>185</sup> Clarke, *Occult Powers*, 27.

<sup>186</sup> Ibid., 28.

<sup>187</sup> Ibid., 25.

earth exemplifies! Of course this was embarrassing, as well as illegal. Secret-keeping would be necessary from the start, and someone who understood the principles of Cartesian metaphysics well enough would be hard to convince that it *didn't* violate the miracle of transubstantiation.

Descartes understood well the value of remaining silent on controversial issues, for sometimes it is the only way to avoid either attesting something which is contradictory to reason or to embarrass oneself. This is best exemplified by his correspondence with Denis Mesland, the Jesuit teacher at La Flèche who was later exiled for engaging with the rationalist. In 1644, when a sympathetic Mesland contacted Descartes asking for his account of transubstantiation, he refused, citing his lack of authority on the matter.<sup>188</sup> This was wise, but Descartes seems to have thought that to have refused a second time would be too great an indication that he could not produce one. Thus is the anxious position of hiding from scandal in plain sight, for when he finally did explain his view of the Eucharist, it was *highly* idiosyncratic. In explaining the “Real Presence” of God in the bread, Descartes also had to introduce a distinction between the general *res extensa* sense of “body” and that of the human body, “the whole of the matter united to the soul of that man”; because in Cartesian metaphysics no living thing truly *inhabits* space and no ontological distinctions between organic and inorganic bodies are proper to *res extensa*, this was undoubtedly a less-than-desirable conceptual division.<sup>189</sup> He used this novelty to explain what he claimed to understand as the everyday phenomenon of “natural transubstantiation,” by which food which is digested is incorporated into the substance of the body (in the new second sense); only at that point could miraculous transubstantiation be described as that which occurs when “the bread and wine become part of Christ’s matter without mixing with... His heavenly body.”<sup>190</sup> Without admitting error of any kind, Descartes nevertheless asked Mesland not to share

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<sup>188</sup> Schmaltz, 36.

<sup>189</sup> Ibid.

<sup>190</sup> Ibid.

this view, or if he did, to “not attribute its authorship.”<sup>191</sup> This is a brilliantly clear precedent for the narrow path that his followers would have to walk in order to balance their various conflicting responsibilities. When in 1648 Descartes discovered that Mesland *had* let his secret slip, in the form of a letter from Port-Royalist Antoine Arnauld containing the pointed request that he clarify his view, Descartes wrote back suggesting that they discuss it in person. Arnauld reiterated his request for a clarification by letter, to which Descartes made no response. That he shared so little information with the curious Arnauld is indeed best understood as “prudence... rather than a change of mind” from the position he shared with Mesland, with whom he remained consistent.<sup>192</sup> This episode shows a number of the practical features of the image-conscious moderation of the socially-inscribed mind-body interface. From the first, there is none of the implicit trust entailed by a mutual, dialectical mode. Exposure of sensitive opinions is weighed as a liability, and Descartes doubtlessly saw his confidence in Mesland as a mistake. An awareness of the far higher stakes of the written word is also evident in his exchange with Arnauld. It is also clear that, in weighing his options, Descartes recognized how much less he stood to lose from ignoring the Jansenist (not yet as controversial as they would become, but still) than from letting a skilled theologian draw out the most heretical implications of his thought.

The choice of Cartesian dualism as a metaphysical program is necessarily the rejection of intimacy in epistemology in favor of a radicalized regime of descriptive authority, and the subsequent avoidance of a kind of personal intimacy insofar as it entails intellectual vulnerability. By rejecting the metaphysical basis for an implicit understanding of objects, reality is reduced to appearances, or more specifically, the subject’s account of them. That description is

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<sup>191</sup> Ibid., 37.

<sup>192</sup> Ibid.

always open to testing, or inspection for signs of deceit. Dualism likewise prevents an implicit understanding of character, as it entails a constant conscious moderation of appearances. The doctrine endorsed by La Forge and Rohault is that perceptions never *represent* their occasion, such that when the occasion is the phenomenon of *another person*, their thoughts and feelings are *doubly* hidden: first behind the existential and causal irrelevance of all apparent objects, and then behind the absence of anything like selfhood from both those appearances and *res extensa*. This structural isolation should continue to inform consideration of the social position *successful* Cartesians took up as secretive outsiders who bide their time, minimizing relations which were not on the basis of reciprocal factionalism, leaving broader implications unsaid, and above all else, the opportunistic criticism of those who made use of intellectual resources which Cartesian dualists had so recently begun to deny themselves.

The uncooperative and uncompromising structural tendencies of Cartesian metaphysics, particularly as situated within a socio-political regime which *demand*ed credulity, is best understood through the lens of their *anti-occultism*. It was most properly a concern of the mechanists, whose explanatory apparatus was exceptionally bare.<sup>193</sup> They were essentially limited to analysis of bodies given (as occasions for) experience and the causal relations between them, a simple theory which was nevertheless on uncertain metaphysical footing. Just as *res extensa* and *res cogitans* lacked *rappor*t, or interaction, so too did the components of a two-body interactions. This was again a means of avoiding overstepping the strict theoretical bounds of dual substantialism by regarding any claims about the affairs of material things as being unfounded, even beyond the issue of representation itself. By analogy to modern tendencies in the discourses of analytic philosophy, the anti-occultist attitude was the favorite rhetorical lever which came with the ontological minimalism of reductive physical theories, to be used

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<sup>193</sup> Clarke, *Occult Powers*, 73.

opportunistically to disrupt realist positions. And equally like the course pursued by advocates of overly-simplistic metaphysical systems of the modern era, French Cartesians sought to grow the descriptive power of their position in the direction of a functional *quasi-realism*, all the while mocking the attempt to develop realist theories. Due to his job of navigating and contextualizing the variety of theoretical accounts after the turn of the century, Fontenelle stands out as having made the most explicit case for a quasi-realist Cartesian metaphysics of science, writing enthusiastically non-confrontational niceties such as, “if physics can never achieve the exactitude of mathematics, it can at least imitate the order of it!”<sup>194</sup> It should be noted that this was in response to their being some who believed physics *could* achieve such precision. This phrase in particular makes far more sense as a political ultimatum, arguing that while one *may not* advocate for a realist picture of mathematical representation, but that there is nevertheless room to *practice* physics, with the same effect as though it were descriptive of reality. This approach was grounded in the unique Malebranchean occasionalism.

#### *the social intention*

Jacques Rohault took up La Forge’s occasionalism, and without reiterating its controversial metaphysics, turned its full polemical force against the scholastic tradition, attacking their view of “sensations as qualities in the objects.”<sup>195</sup> Scholastic discourse was easier to criticize than ever as an occasionalist, and it was certainly less daunting of a task than further interpreting and grounding truth within that metaphysical scheme and publishing generalized claims on that basis. Following the trajectory of occasionalism through by further merging ontology and divinity would be Malebranche’s contribution, resolving questions of the mind’s access to truth but doing so in a way that was widely disputed by his colleagues. However, this

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<sup>194</sup> Shank, 118.

<sup>195</sup> Ibid., 48.

would occur in a context of heightened peril for those labelled Cartesians as compared to the decade of the 1660s, thanks largely to the social conduct of Robert Desgabets.

Descartes had expressed in no uncertain terms that stuff and the awareness of it are fundamentally different, but was ill equipped to put them back together, citing God just for proof that they do at all. As his pineal convictions show, as well as the continued theorization regarding “*ideas of*,” differentiated only on a spectrum of clarity, Descartes’ theory of mind never reflected the dramatic reorientation that his dualism necessitated.<sup>196</sup> This is to say that using the phrase “*idea of x*” takes care to indicate a feature of consciousness and not *x* itself, but that it does so in an unsophisticated way that problematizes neither the complexities of the relationship between *x* and some speculative, material referent, nor any profound sense of how the idea in question might function within a conscious experience that characteristically has no access to *x*.<sup>197</sup> Thus Cartesians were left little in the way of a common vocabulary with which to begin to assemble a positive epistemology. Occasionalism articulated a break from responsibility for the expression of states of being foreign to the mind (ideas being *of* anything at all) in such a way that still allowed productive conversations correlating successive appearances, but was immediately faced with the question of where such appearances *do* come from, if not their occasional cause directly, as well as the contrasting question of whether hypotheses can be certain. This theory systematically solved the problem of whether or not “external” objects of consciousness exist at all with a general *no*. Desgabets differed completely in regards to interpreting the “*idea of*” relation, and rejected major components of Descartes’ ontology in the process.<sup>198</sup> This is to say he embraced a universal *yes*.

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<sup>196</sup> Ibid., 62.

<sup>197</sup> Clarke, *Philosophy*, 54. “Simple natures” appear to express the generalized object of conception, and seem not to have done any explanatory work before traditional developments.

<sup>198</sup> Schmaltz, 130.

When Desgabets wrote that “it suffices to think of a thing... to have a demonstrative proof of its existence” in his unpublished 1675 *Supplément à la philosophie de M. Descartes*, it is clear that he is not using “existence” to mean a particular instance of *res extensa* as Descartes had.<sup>199</sup> Instead he meant to indicate that on a fundamental level, the *res cogitans* is not subject to falsifiability. When the mind perceives a state of affairs, there is a kind of autonomy to what is seen as well as what does the seeing; whether or not what seems to be seen is later judged to have been somehow *inaccurate* cannot undo this. He characterized Descartes, in contrast, as holding the view that “thought is equally thought, whether it has for an object being or nothingness.” This reasonable difference of opinion from Descartes motivates him to reject the negative dogmatic method entirely.<sup>200</sup>

This description of thought as exhibiting “intentionality,” or as necessarily being oriented towards some object of that consciousness which can be stated positively as such, constituted a major step forward at the beginning of the twentieth century, and to that extent it is a mischaracterization when Schmaltz describes Desgabets’s work as “antimodern.”<sup>201</sup> But if it is taken to mean regressive, or that Desgabets used intentionality to *reestablish* a direct realism which he saw as in agreement with the perceptual claims of the scholastics, then it is perhaps more fitting.<sup>202</sup> Judgement of the modernity of his view is far too bound up in what could be said with the vocabulary he had at his disposal, as claims in terms of unqualified “sensations and ideas” appear to entail the existence of “external things” which are definitionally beyond apprehension, to both the reader today and Desgabets’s contemporaries.<sup>203</sup> The boldness required to turn against the occasionalist tide in asserting that the same principle which demonstrates the

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<sup>199</sup> Ibid.

<sup>200</sup> Ibid., 130-31.

<sup>201</sup> Ibid., 131.

<sup>202</sup> Ibid., 138.

<sup>203</sup> Richard A. Watson, *The Breakdown of Cartesian Metaphysics* (Indianapolis: Hackett Publishing, 1998): 82.



existence of God does the same for objects should not go unnoted, given that it required standing against the legacy of Descartes himself.<sup>204</sup>

While by no means a bad philosopher, Desgabets was a disastrous publicist and negotiator. He showed quite the knack for endorsing disadvantageous positions, and on multiple occasions an expression of support for the work of a fellow Cartesian was met with public denunciation. Clearly there was something beyond the idiosyncrasies of his thought that repulsed his contemporaries, although perhaps the distinction should not be drawn with such finality. Just as La Forge, Desgabets had intimate access to the intellectual estate of Descartes in the years immediately after his death through association with Clerselier.<sup>205</sup> But whereas La Forge utilized the immense *consensus-shaping* power of this position to tactfully secure an especially palatable interpretation of the master's thought at the crucial moment prior to the development of an orthodoxy, Desgabets did the *exact opposite*, seizing on the *least* palatable aspect of Descartes' thought. Clerselier had chosen not to print Descartes' correspondence with Mesland in order to avoid the "publicly sensitive issue of eucharistic transubstantiation," and probably immediately regretted not doing more to keep it quiet, specifically keeping it secret from Desgabets, when he received soon thereafter a letter expressing the indignation of two doctors that Descartes and Cartesians would ever think such a thing.<sup>206</sup> Clerselier deferred the responsibility for formulating a response to his Benedictine friend who had first made light of the issue, whose testimony he couched in Desgabets' stature as a "good religious"; when in 1667 he received another, this time from Poisson, an Oratorian attendee of the Wednesdays, charging heresy, he again deferred to Desgabets on the same basis.<sup>207</sup> So in a sense it can be said Clerselier "drew Desgabets into

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<sup>204</sup> Schmaltz, 139.

<sup>205</sup> Ibid., 37 & 38.

<sup>206</sup> Ibid.

<sup>207</sup> Ibid., 39.

battles” on the Eucharist, but it would be more fair to say that Desgabets had it coming, especially after he defended the *contra Mesland* account in both cases.<sup>208</sup> Clerselier was not a priest, and seems to have confused Desgabets’ confidence and learning for a well-habituated awareness of what it is extremely imprudent to say. And indeed, Desgabets seemed entirely comfortable discussing the subject, admitting that he had been having innovative thoughts on the matter since before encountering Descartes’ account.<sup>209</sup> As his stature as a Cartesian grew he continued to associate with and endorse the *contra Mesland* account which Descartes’ himself hoped would never see the light of day, but which Desgabets was now pushing Clerselier to have published.<sup>210</sup> In fact, when he went on to develop a doctrine of the “indestructibility of matter” which further alienated from the Cartesian mainstream, he presented it as a defense of the Thomist account of the Eucharist and against the Scotist one, the two leading *legitimate* accounts of transubstantiation within contemporary scholasticism.<sup>211</sup> This is roughly the beginning of Desgabets’ efforts to not only *not avoid* the metaphysical scandal which everyone else seemed to realize could *easily* ruin a career, but to *actively entangle* it with every other relevant taboo. In 1670, after receiving a letter in which the Jansenist Arnauld expresses his worry that the *contra Mesland* account was heretical, Desgabets met with the thinkers of Port-Royal, accompanied by the “procurer general” of his order.<sup>212</sup> Both expressed dismay at his continued rejection of long standing theological tradition, with Arnauld emphasizing how close the *contra Mesland* account came to agreement with the Calvinist heresy. Arnauld deferred judgement until having heard his colleague Pierre Nicole’s thoughts; with the validation of “Nicole’s negative judgement” he expressed his disapproval in a letter to Clerselier, which he specifically requested be shown to

<sup>208</sup> Ibid., 3. Frankly, this claim of Schmaltz’ is hilariously misrepresentative of Desgabets’ general attitude toward intellectual battles, as will be seen.

<sup>209</sup> Ibid., 38.

<sup>210</sup> Ibid., 43.

<sup>211</sup> Ibid., 41.

<sup>212</sup> Ibid.

Desgabets, “no doubt in hopes that it would dissuade the Benedictine from developing his eucharistic account further.”<sup>213</sup>

It is unclear how sophisticated Desgabets’ thought was or would have become if he had been able to publish more often, but luckily *Considérations sur l’état présent de la controverse touchant le T. S. Sacrement de l’autel* garnered enough buzz to last a lifetime. Insofar as it states an intention to *weigh in* on the problem of the Eucharist, the title alone displays a markedly different approach to controversy than that typified by *Traité de physique*, both of which were published in 1671.<sup>214</sup> And it was certainly not *Rohault’s* work which accounted for the (previously mentioned) address later that same year by the Archbishop of Paris, to the faculty deans and college principals of the University of Paris on behalf of the king, demanding firm adherence to the terms against anti-Aristotelian teaching established in 1624, and declaring that the “certain opinions” unacceptable within higher learning were also present “in the rest of the city and in certain parts of the kingdom.”<sup>215</sup> It was expressly worried that such opinions might disrupt “the explanation of our mysteries.” This was true for any Cartesianism, but only Desgabets had been foolish enough to spell this out in public.

*Considérations* had been published anonymously abroad but was quickly connected to its author, no doubt due to the ample details it gives of a uniquely contentious relationship with the Port-Royalists.<sup>216</sup> In particular, it noted their disapproval of the *contra Mesland* account but then proceeded to defend it on the basis of the claims made in the *Port-Royalists’ latest work*.<sup>217</sup> To reiterate, the heretical skeleton he had dragged out from the closet of the vulnerable Cartesians was then shown to follow from the premises claimed by the *ultra-vulnerable* Cartesian-

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<sup>213</sup> Ibid., 41 & 42.

<sup>214</sup> Ibid., 43.

<sup>215</sup> Ibid., 29.

<sup>216</sup> Ibid., 33.

<sup>217</sup> Ibid., 42.

Jansenists who had explicitly denounced him. There is no way his philosophy as such could possibly have been taken seriously under such circumstances. He had published the *Considérations* to convince the Port-Royalists that they should take his radical view, but this instead had the predictable consequence of publicly implicating them as heretics in a way they had no doubt hoped to avoid. This led Arnould and Nicole to an audience with the Archbishop of Paris in 1672, at which they denounced Desgabets' thought, again.<sup>218</sup> They were in the middle of trying to prove that Jansenism need not be considered anti-establishment or heretical, and therefore were not inclined to public Cartesianism, association of heresy with Cartesianism, *and* the association of heresy with Port-Royalist thought in its own right. That this happened in the first years of the peace of Clement IX, the best opportunity the Port-Royalists ever had for casting Jansenism as an acceptable alternative to the orthodox reading of Augustine, must have been enormously frustrating. After asserting for the record that Desgabets was wrong, the Archbishop also ordered that further normative pressure be brought to bear through the monastic channels, resulting in his forbodence from further propagation of the *contra Mesland* account, which he was also required renounce.<sup>219</sup> That at the height of the scandal he would express regret and a lack of forethought concerning possible audiences at the times of writing *and* publication only validates the foregone conclusion regarding Desgabets' awareness of the political implications that necessarily came into play when one *took the stand* in his society, irrespective of the truth of his claims.<sup>220</sup> Thus if antimodern is to mean a mind better suited to a cloistered intellectual sphere, one before the public scrutiny and politics of discursive vulnerability, then Desgabets was that. His metaphysical thought may have been far more secular than any occasionalism, but the directness with which he approached collaboration showed maladaptation

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<sup>218</sup> Ibid., 43.

<sup>219</sup> Clarke, *Occult Powers*, 26.

<sup>220</sup> Schmaltz, 34.

to the social realities that accompanied the new rationalism to say the least. His Benedictine vows provide a good angle on his marginalization: as the positive affirmation of the same authority structure which would see him silenced, scrutiny of implications and discourses labelling deviance were welcomed into his life prior to any space for advantageous self-presentation. And indeed, there is no reason to assume that Desgabets *sought* the kind of tactical advantage of the discursive high-ground that other Cartesians of a more judicious, even urbane sense of what is appropriate, as well as the *solitaires* at Port-Royal, have been seen to pursue. Perhaps cutting his losses had never crossed his mind, and he put *such* stock in the normative account and felt *such* expressive intimacy among the brothers of his order (with whom he had a following) that he simply began expressing the truth exactly as it appeared to him and never stopped, propelled by the touching conviction that truth alone might carry the day.<sup>221</sup> If this likelihood is the case then he was far from modern in the sense that genuine Cartesians embodied.

The wave of official action against Cartesianism that drove it further underground at the beginning of the 1670s may have been sparked unilaterally by the actions of Robert Desgabets, but the events which followed should also be understood as unfolding in line with the logic by which a totalitarian regime of cultural descriptive power negotiates and updates norms within its institutions. Desgabets remained active through the decade and continued to embarrass fellow Cartesians, but would never scandalize on the grand scale again; that power had not been his in the first place, as he was the occasion for a broader social production. The exposure Desgabets brought to the most antisocial, counter-cultural and heretical aspects of Cartesianism allowed for institutional discourses of explicit condemnation to finally take place, advancing a process of delineation between on the one side the “politically destabilizing Jansenism” and associated anti-

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<sup>221</sup> Ibid., 4.

authoritarian aspects of Cartesianism, and on the other, that which constituted the first *functionally normative* Cartesianism, which might also be called the first normative science in the modern sense.<sup>222</sup> This is to say that leaving Desgabets squarely in the past allowed Cartesianism to begin an ascent towards legitimacy which had not yet begun during the 1660s and the socially ambiguous period of the *Wednesdays*; and indeed, when further political pressure was put on the Cartesian-Jansenist connection in 1691, (again in the form of demands by the Archbishop on the University) it was as a far more delicate banning of particular theses, and it again cleared the way for further legitimization.<sup>223</sup> For as early as 1678, with Cartesianism safely rejected from all official accounts, Louis XIV allowed it to be taught to his son, responding that he was not worried so long as it was prevented from being established in any position of institutional legitimacy.<sup>224</sup> This establishment would ultimately occur by way of the authority vested nominally in Nicolas Malebranche, and supported by his theory for an absolute grounding for the occasionalist epistemological program.

Malebranche was first exposed to Cartesian thought by his reading of *L'Homme* the year it was published, thereby an occasionalist from the start, and an “establishment” (used only in the loose sense connected to the *Wednesdays* crowd and Clerselier’s executive authority) one at that.<sup>225</sup> However, his publication of *Recherche de la verite* in 1674 problematized that implicit association by drawing to the fore epistemological ambiguities present in La Forge and Rohault. Indeed, one must consider how much of the criticism levelled against it was a response to the theoretical seriousness with which it took the established role of God, and the elimination of much of the ambiguity which had been maintained from Descartes. Having been led by La Forge

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<sup>222</sup> Ibid., 70.

<sup>223</sup> Ibid., 217-18.

<sup>224</sup> Ibid., 70 & 71.

<sup>225</sup> Clarke, *Occult Powers*, 19.

to reject the truly Cartesian (that of the latter-day Descartes) account of the relation between concepts and the states of affairs which they reflect, under which the *idea* was equivocal to the extent of possibly bridging the difference between brain-states and thoughts, occasional theory stood with what will be called the *innateness question* very much unanswered. Then as now, talk of mental phenomena which are in *any* capacity or aspect innate is taken by many as anti-modern and anti-scientific idealism; those who would judge Descartes on such ideologically rigorous terms were spoken for by John Locke in his 1690 *Essay Concerning Human Understanding*.<sup>226</sup> But those who took Descartes as claiming the existence of innate *truths* or *laws*, or who understood his rationalism as incompatible with (all but the most radical) empiricism, misunderstood that the usage was ontological and causal, and *not* directly epistemological. The usage of both innate and “*inbred*” as equivalent terms for the same quality in a contemporary English-language translation of a minor 1672 work gives a better sense of the concern the (occasionalist) Cartesians were trying to address: if mental phenomena are causally and qualitatively unrelated to states in the world, how do they happen and where does their content come from?<sup>227</sup> Descartes was interpreted as thinking that *res cogitans* “has a disposition to acquire certain ideas when appropriately stimulated,” which is entirely useless if his account of stimulus has been made inaccessible and irrelevant.<sup>228</sup> The probabilistic hypothesis further indicates the nature of occasionalist truth-claims as being both methodologically and epistemologically ungrounded.

Malebranche took the orthodox Cartesian claim that unrepresentative phenomena correspond to *res extensa* by virtue of God, and applied this rationally to the innateness question. If appearances arise by His will and correspond to a materiality which is also His doing, it is

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<sup>226</sup> Ibid., 43.

<sup>227</sup> Ibid., 63. Emphasis mine.

<sup>228</sup> Ibid., 62.

intuitive that they would also *come from God*, in a sense.<sup>229</sup> Finally, the project to characterize certain knowledge on an absolute basis which Descartes at least aspired to initiate had a functional theory.<sup>230</sup> This required the introduction of another, “corresponding dualism” which allowed a necessary connection between experience and absolute truth to be drawn.<sup>231</sup> This was motivated by the concern that inherently finite consciousness of nevertheless infinite beings, such as *res extensa* and God, poses a problem of scope unless those infinite ideas exist ideally as the infinite consciousness of God.<sup>232</sup> Malebranches’ comfort with ideas being *of* but not resembling things, and his neo-Platonic drive more generally to configure *res cogitans* relative to a transcendent reality (while not viewing this as jeopardizing dualism) stems from his commitment to Augustinian thought, which emphasizes a dependence relationship with God.<sup>233</sup> This equipped him to advance the occasionalist discourse which needed to ground certainty somewhere other than materiality, as he already felt it improperly sought there. What’s more, this distinction between ideas in the most proper sense and the derivative, “subjective modifications of the individual mind” to which Cartesians have access was commonly accepted among the (broadly Augustinian) Oratorians.<sup>234</sup> That structure put him on the opposite end of the spectrum of authority control within monastic institutions from Degabet’s Benedictines, earning him none of the official censure the other faced.

Despite being a fairly modest step from La Forge and Rohault, it was nevertheless the first of its kind for the historical Cartesian orthodoxy, and drew a great deal of technical criticism on that basis, questioning the relationships between ontological and functional claims, and so

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<sup>229</sup> Ibid., 53. It has been difficult to present La Forge’s occasionalism without inadvertently implying that he also believed this, as it seems to be the most coherent explanation of the role God was already playing.

<sup>230</sup> *Recherche* predated Desgabets’ general theoretical work.

<sup>231</sup> Ibid., 57.

<sup>232</sup> Ibid., 53 & 54.

<sup>233</sup> Ibid., 59.

<sup>234</sup> Ibid., 53.



forth.<sup>235</sup> His most extensive opposition was from Arnauld, a fellow Cartesian and Augustinian, but the latter of the Jansenist stripe. The opposition which Malebranche faced was different from what Desgabets endured, insofar as it was discernibly *in-group*, in a way that resembles modern institutional (academic) discourse in the narrower sense meaning a field of positions oriented around an ongoing process of theory analysis, which is to say that his claims were treated as at least *potentially* true.

The first major disputant against the *Recherche* was Simon Foucher, who had just written a book in 1673 with a similar title, *Dissertations sur la recherche de la verité*.<sup>236</sup> This work expressed a position of academic (classical) skepticism and probabilism.<sup>237</sup> The full title of Malebranche's work not only references Foucher, but also Descartes and La Forge in an interesting representation of the tradition at hand. However, Foucher took it as a response to his work, quickly publishing a *Critique de la Recherche de la verité* in 1675.<sup>238</sup> In this work he expressed doubt concerning the possibility of a theoretical account which is functionally analogous to realist representations of things themselves in any way, without violating the orthodox "non-resemblance" of mental states.<sup>239</sup> This is a fair critique, and amounts to a conservative rejection of Malebranche's attempt to speak for all occasionalists in virtue of the implications of any occasionalism, and is what marks the divergence of his theory of "ideas in God" from the occasional mainstream established at Rohault's Wednesdays.<sup>240</sup>

Of far more interest than this theoretical exchange is the social circumstances of the exchange of texts, which continued on. Malebranche's *Recherche* was a longstanding project of

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<sup>235</sup> Ibid., 57-59.

<sup>236</sup> Watson, *Downfall*, 14.

<sup>237</sup> Ibid., 19.

<sup>238</sup> Ibid., 17.

<sup>239</sup> Clarke, *Occult Powers*, 58.

<sup>240</sup> Ibid., 59.

multiple volumes, of which many excluding Foucher had been aware.<sup>241</sup> Even Richard Watson, Foucher's leading advocate, characterized the *Critique de la Recherche* as a "lack of intelligence of one kind or another" which he attributes to his relative lack of "contact with the philosophic world of Paris."<sup>242</sup> It appears, fittingly, that the likely reason Foucher lacked such crucial social access was social skills, judging by a dinner with a potential patron at which he "fought with everyone and tried continually to talk of things unsuitable to the place and the people present," leading the Duke in question to reject him completely.<sup>243</sup> This tendency to fail to understand the importance of social context and audience played out most notably in the aftermath of Foucher's response to *Recherche*, which put Malebranche in the position to respond immediately that same year, in the form of an "offensive preface" to the second volume which said Foucher had misunderstood the work, and which is known to have injured his pride.<sup>244</sup> From the perspective of the Cartesian readership, Foucher fought an uphill battle. He was not an occasionalist, and thus was arguing against a far better established figure than he. This social context was expressed effectively as Malebranche's ability to respond without having to publish a piece with a title beginning *Critique*, as Foucher had. He simply unveiled his positive doctrine, allowing it to speak against Foucher. This sequence of naming confuses an otherwise straightforward dialogue between skeptic and idealist, in which a far greater perception of burden of proof would have fallen on Malebranche than indeed did. The mockery Foucher faced at Malebranche's hands for failing to notice that only three of the projected five sections could not constitute a completed work moved him to go to print again in 1676.<sup>245</sup> His *Réponse pour la Critique à la Preface du second volume de la Recherche de la verité* defensively repeated much of what had been said in

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<sup>241</sup> Watson, *Downfall*, 17.

<sup>242</sup> Ibid.

<sup>243</sup> Ibid., 15.

<sup>244</sup> Ibid., 17.

<sup>245</sup> Ibid., 53.

the *Critique*, while also backtracking and downplaying his criticisms as having been aimed at Cartesians more generally, not necessarily Malebranche alone.<sup>246</sup> Foucher clearly understood that his potential to acquire an authoritative statute was ruined by this embarrassing exchange, as he never again engaged so contentiously in current affairs.

At least that is nearly true, as he published one other hasty defense in 1676 which was directed at Desgabets rather than Malebranche. It should at this point be unsurprising that the occasion for Foucher's *Nouvelle dissertation* was the inexplicably poor social skills of the Desgabets.<sup>247</sup> Just as he had argued on behalf on the Port-Royalists in defense of something they did not believe, he responded to Foucher's *Critique* with the *Critique de la Critique de la Recherche de la verité*, in which he defended a metaphysical system entirely different from Malebranche's.<sup>248</sup> Not only did this draw further Eucharistic concerns to the Cartesian project, it was also unsurprisingly denounced by the author it seemed to purport to defend.<sup>249</sup> While in fairness, a critique of a critique of X need not affirm X by strict necessity, only Desgabets would misunderstand or be comfortable with its clear implication of doing so. Malebranche was so confident of this that he endorsed it on that basis, without having yet been able to read it; being shortly after the Eucharist scandal but prior to any published metaphysical deviance, it appears Desgabets' reputation did not yet proceed him as it would soon after.<sup>250</sup> Thus Foucher was not the only Cartesian commenter reflected in the preface to Malebranche's second volume. The phrasing of the allusion to Desgabets warrants attention, as its tongue-in-cheek reference to self-control illuminates the relevance of the analysis at hand: he guesses that his detractors, and specifically those who defended "a work in which they had no part," did so because they had

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<sup>246</sup> Ibid., 56 & 57.

<sup>247</sup> Ibid., 17.

<sup>248</sup> Schmaltz, 71.

<sup>249</sup> Ibid., 4.

<sup>250</sup> Ibid., 134.

been “ill-treated by some invisible hand.”<sup>251</sup> By facetiously assuming (as is only proper) the most honorable and well-considered of motivations to guide Desgabets, Malebranche is forced to conclude that the *Critique de la Critique* was the product of possession. This is the closest he can come to expressing the actual simplest explanation, that Desgabets lacks discretion, without openly violating the principle of civility which governed polite discourse. However, his “invisible hand” comment nevertheless strikes directly at the heart of the Cartesian and masculine anxiety over strict control of one’s public image. This encounter is readily explicable in terms of Lewis Seifert’s thesis of the hegemonic masculinity of *civility* which governed authorship at the time: Malebranche manages his discursively dominant and socially elevated position as the *honnête homme* by pointing to the fact that Desgabets plays the part of the *fanfaron*, the unrefined *blowhard*, in comparison to himself, without sinking to his level (witnesses the sting of remarks, socially speaking.)<sup>252</sup> Desgabets subsequently responded to the response to the *Critique de la Critique* by claiming that it had been published without his permission, just as he did when the *Considérations* garnered such controversy; in this regard he exemplified the *lack* of such control.<sup>253</sup> The cautious Malebranche, apparently feeling that no amount of distance between his career and that of Desgabets could be enough, *added a warning label* to later editions of the second volume expressing his regret that the *Critique de la Critique* had happened. The title which Malebranche had originally expected to describe a work of theoretical backup in the battle over the direction of Cartesianism, instead ended up being quite

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<sup>251</sup> Ibid., 133.

<sup>252</sup> Louis C. Seifert, *Manning the Margins: Masculinity & Writing in Seventeenth-Century France* (Ann Arbor: University of Michigan Press, 2009): 9.

<sup>253</sup> Ibid., 134. Even if he was telling the truth in both instances, “fool me once” rules apply.

literal, as the text which it described primarily sought to characterize the author of the *Critique* as “not being concerned with the search for truth.”<sup>254</sup>

Malebranche was probably thrilled that Foucher and Desgabets went after each other, and maybe also that they continued to do so long after the initial hostilities had ended. An official draw-down of insult occurred when the 1678 reprint of *Recherche* lacked the inflammatory preface, and was met with the equivalent omission from Foucher’s *Réponse* the following year.<sup>255</sup> His dispute with Arnauld was far more substantive, and extended from 1683 until the end of the century and the death of the Port-Royalist.<sup>256</sup> Arnauld’s first critique of Malebranche’s *Recherche*, titled *Des vraies et des fausses idées*, was met the following year with a *Réponse de l’auteur De la Recherche* of Malebranche’s own, specifically naming Arnauld, against which *Défense de M. Arnauld contre la réponse* appeared also in 1685. On the basis of the assembled evidence it is clear that the period from Malebranche’s public debut to the end of the century was one of unprecedented belligerence for the underground Cartesian discourse, and indeed, it is all too likely that seventeenth century readers had just as hard a time keeping the various *Réponses* and *Critiques* straight as does the historian today. After Arnauld and Malebranche had aired multiple rounds of criticism, the two carried on exchanging ideas, but did so in the form of letters, apparently thinking it best to forego further publicity. While the Cartesian Eucharist scandal of the early 1670s a thing of the past by that time, the Jansenist controversy was heating back up, and both men did well to avoid negative publicity.

Not only was Arnauld the longest term of Malebranche’s theoretical critics, he was also the most similarly disposed philosophically and theologically. That is to say, both were made

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<sup>254</sup> Watson, 66. This appears not to have been a wholly unfair characterization of Foucher. That he contributed little original thought appears to be much of the reason why Watson, a midcentury Quinean radical if there ever was one, casts a bit player by all other accounts as the only lucid philosopher in the room.

<sup>255</sup> Ibid., 17.

<sup>256</sup> Steven M. Nadler, *Arnauld and the Cartesian Philosophy of Ideas*, in *Studies in Intellectual History* (Manchester: Manchester University Press, 1989): 79.

vulnerable by their allegiances to Cartesianism and Augustinian theology.<sup>257</sup> They were also intellectual associates before becoming rivals. Malebranche even sought Arnauld's approval before publishing his 1680 *Traité de la nature et de la grâce*, having both explained its contents to him "at the home of a mutual friend," as well as sending him a draft when Arnauld fled the country for political reasons.<sup>258</sup> It is this text which resulted in most of Malebranche's body of work being placed on the Index of Prohibited Books, for his occasionalism made miracles, dogmatically interpreted "as events that violate all order" impossible, instead casting *all* events as a kind of sequence of orderly miracles.<sup>259</sup> However, the initial, central issue Arnauld took with Malebranche's thought was not motivated by the heresy of his theological innovations, but the redundancy inherent to the ontology presented in the *Recherche*.<sup>260</sup> It appears that as fringe Augustinians at a time when the Jansenist scandal was silenced but still present in society, both thought it best to avoid theological dispute. Instead, Arnauld attacked the God's-mind occasionalism on strictly metaphysical terms, rather than questioning whether God is of such a nature as claimed; *Des vraies et des fausses idées* addressed Malebranche's "representationalism" and associated problems.<sup>261</sup> He characterized Malebranche as claiming the existence of an objective being, or *res extensa*; a host of objective ideas about that objective being, or what he characterized as "*être représentatif*"; and on top of that, the awareness of the *être représentatif* of the object in question.<sup>262</sup> Arguing from the fact that the mind which is aware must either be actively entertaining or incorporating an *être représentatif*, Arnauld insisted that this act of ideation alone is sufficient to account for phenomena without reference to any ideal

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<sup>257</sup> Clarke, *Occult Powers*, 33.

<sup>258</sup> *The Cambridge Companion to Malebranche*, ed. Stephen M. Nadler (Cambridge: Cambridge University Press, 2000): 88.

<sup>259</sup> *Ibid.*, 272.

<sup>260</sup> Nadler, *Arnauld*, 79.

<sup>261</sup> *Ibid.*

<sup>262</sup> Clarke, *Occult Powers*, 57 & 58.

*être représentatif*. This was the most coherent of the conservative metaphysical critiques of Malebranche, and was endorsed by “many great minds of the period.”<sup>263</sup> However, Arnauld’s own direct realism was of little significance beyond its influence on Régis.<sup>264</sup> As the most outspoken Jansenist-Cartesian, it is little surprise that his thought would fail to make the grade in terms of socio-political permissibility, despite at one point having voice speaking against a man who seems to have had very few allies, at least in terms of theoretical disputes.

The last crucial voice to stand against Malebranche, and the only one to make it to the philosophically arbitrary but politically decisive finish line of 1699 with him, was Pierre-Sylvain Régis, the “most outstanding protégé” to both Jacque Rohault *and* Robert Desgabets.<sup>265</sup> He is best identified as the opposing pole in the struggle for *de facto* theoretical dominance at that moment of *de facto* legitimacy, and certainly saw himself as positioned to claim the authority of synthesizing his underground tradition as late as 1690, when he published the grandly titled *Système de philosophie, contenant la logique, la métaphysique, la physique et la morale*, which was influential abroad if less so in the metropolis of Cartesian discourse. Régis was not an occasionalist, as his allegiance to the intentionality of Desgabets reveals; however, a great deal had changed in the decade since his predecessor’s infamy, such that Régis was able to emphasize his own Cartesian orthodoxy relative to Malebranche, in virtue of a resemblance to the conflicted, *late* Descartes.<sup>266</sup> Clearly, the accord forged at the Wednesdays had become a thing of the past. It is no great leap to infer that the high regard in which Rohault held Régis was primarily informed by personal factors such as their relationship having started all the way back in 1655, well before things got interesting, rather than much in the way of doctrinal

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<sup>263</sup> Nadler, *Companion*, 91 & 92.

<sup>264</sup> Nadler, *Arnauld*, 102.

<sup>265</sup> Clarke, *Occult Powers*, 21 & 22.

<sup>266</sup> *Ibid.*, 59.

inheritance.<sup>267</sup> One can only wonder what effects would have been felt if Régis had been at political liberty to continue the Wednesday conferences through the 1680s.

*Heir* would be a more accurate description than *protégé*, for the two actually stood at odds on many issues. Rohault was no great theorizer, but Régis certainly was, endorsing the former's physics but rejecting his compromising metaphysics in favor of those of Desgabets.<sup>268</sup> He also seems to have favored Desgabets' impudence, or more charitably, *team spirit*, taking it upon himself to produce a *Réponse* to the 1689 anti-Cartesian text, *Censura philosophiæ cartesianæ* (he was, to his considerable credit, wise enough to wait until 1691 so as not to jeopardize the publication of his *Système*, which had taken a decade to secure.)<sup>269</sup> As no good *Réponse* is complete without a preface of cutting remarks, Régis directly challenged the claim to authority implicit in the work's title, questioning not only his capacity to reject Descartes, but even to comprehend "the works of this great philosopher"; this sort of polemic is a complementary analog to the Cartesian practice of lamenting the burden they bear so as to make traditionalists look slavish by comparison, for it is a sort of border-policing against traditionalist attempts to assume the *aesthetic* of authority for which Cartesians sacrifice so much.<sup>270</sup> The *Censura*'s conservative author Pierre-Daniel Huet was so taken by Régis' counter and the publicity which it generated that he dedicated his 1692 *Nouveaux Mémoires*, a satirical biography of Descartes to the "prince of the Cartesian philosophers," said to be more Cartesian than even their namesake himself, and who was revealed to be Régis only after his 1707 demise.<sup>271</sup> These ways in which Régis and his predecessor exposed themselves publicly did not draw the critique of their peers, as Malebranche's actions had, but rather attention to the socio-

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<sup>267</sup> Ibid., 22.

<sup>268</sup> Schmaltz, 8.

<sup>269</sup> Ibid., 220.

<sup>270</sup> Ibid., 228.

<sup>271</sup> Ibid., 227-28.



politically untenable components of their thought, by those reactionaries who would expose it further. Régis' longstanding frankness about the “quasi-Spinozistic” features of his metaphysics can be compared to Malebranche's unbroken silence on the ways in which his reading of Augustine might or might not have drawn on current Jansenist trends.<sup>272</sup>

Insofar as Régis “proposed a reconciliation of Descartes’s dualism,” Huet’s judgement as more rather than less Cartesian would not be endorsed by many occasionalists. However, there is one bizarre distinction which Régis made which was not only embraced by occasionalists, but that actually allowed for an important reconciliation between those who took after Rohault and those who took after Malebranche. By 1690 the historical field of French Cartesian theories of the natural world was populated, and so it would be true by conceit to say that the interesting developments were no longer among those devising the systems, but rather *using* them; however, it should also be emphasized that the users entered a positive breakthrough in the years 1690-93.<sup>273</sup> The purely *disciplinary distinction* which Régis made in the *Système* is what allowed this, making it now unavoidable to express that at some point, this Cartesian conversation which only a generation earlier had been consigned to clandestine conversations in a Paris apartment, denounced by all authorities, had crept silently into the institutional, sociable and *visible* space of the French Royal Academy of Sciences. The Academy had been created for filling with the sort of dualist rationalists who shall go unnamed in 1666, and by 1699 they had forgotten to exclude the kind that *had* been named. When Régis made the distinction between the *mechanical* and the *physical*, his motivation was already political reconciliation, but on a personal scale: he admired and embraced the tradition in physics begun by his dead friend, Jacque Rohault, but this system was a hypothetical corpuscularianism which postulated insensibly and indeed infinitely small

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<sup>272</sup> Ibid., 121-28.

<sup>273</sup> Shank, *Newton Wars*, 38.

particles, and which contradicted the approach of Régis' own philosophy as well as the spirit of occasionalism.<sup>274</sup> However, it contradicted his (empiricism de-emphasizing) direct realism far less than other more scientifically acceptable systems, such as that of Malebranche's followers in particular, whose interest in describing the mechanical functioning evident in the world was only truly validated when they began adapting calculus to the task, thereby producing “*analytical mechanics*.”<sup>275</sup> While truly an abominable dissection of the world, the physical-mechanical distinction was no more so than the Cartesian dualism which motivated and grounded it (the second instance of this theoretical reduplication of the discrete binary to be seen); physics was speculation regarding the private nature of *res extensa*, or mind-independent matter, whereas mechanics sought to infer the absolute relationship evident in a sequence of appearances. In a socially real sense, Régis gave the so-called “Malebranche circle” technical permission to develop an alternative explanatory project, and they began at once. As early as 1693 those mechanists had made an ally of Bernard le Bovier de Fontenelle; when he was made “perpetual secretary” of the Royal Academy in 1697, Cartesianism had made it to the top.<sup>276</sup>

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<sup>274</sup> Clarke, *Occult Powers*, 134-35.

<sup>275</sup> Shank, *Newton Wars*, 58.

<sup>276</sup> *Ibid.*, 38 & 59.

## Chapter Three

### Institutional Maturity of the New Philosophy

It is the transitional period of technical discourses quickening pace but efforts to maintain nominal investment in the power of the traditional cultural hegemony that is typically meant by “early modern.” Urban life and the self-conscious bearing of civility which blended out from the courts there remains of the concern, as does that increasingly ubiquitous project of socio-discursive meaning called honor. As a quality, honor underpinned and measured not only the virtues of an individual, but the also the “worldly goods” and legal privileges which they inherited.<sup>277</sup> As a discourse, honor negotiated the relative value of the members of an elite class, the existence of which was wholly dependent on the iniquity of a hierarchical arrangement which could nevertheless be influenced by a select few. This discourse of interpersonal judgment is intimately bound to the history of the Academy as the site where a familiar masculinized metaphysics of descriptive supremacy took its first steps towards interpolation in a broader system of power. This culture of reaffirmed honor, which burdened the gentleman of any standing with the “obligation to present himself in public,” would find its ideal theater in academic life.<sup>278</sup> In time participation in cutting-edge scientific discourses came to reflect the character of the participant. Consequently, its institution was hallowed in a manner reserved for longstanding organs of the *Ancien Regime*.

#### *privileges of the Academy*

In his work *The Anatomy of a Scientific Institution*, Roger Hahn notes that the prestige of the Royal Academy grew not merely on the basis of the advancement of its works but as a sphere

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<sup>277</sup> Ibid., 16.

<sup>278</sup> Ibid., 21.

of high culture more generally.<sup>279</sup> And while it is difficult to argue this from necessity, there are numerous reasons why the Academy was perfectly positioned for incorporation into the traditional cultural regime. In a unilateral, monarchical culture such as that of early modern France, an honorable association with the state was an indication of the highest virtue. The king, as representative of God, ordered his realm on the basis of a sacred design. No institutional foundation, then, could surpass the honor of a mandate from Louis XIV himself. The nature of the Academy's close relationship to the crown changed over time, but always included a unique intellectual freedom.<sup>280</sup> The privilege of the king, codified by the 1699 reforms, to withhold his recognition of not only the appointment of officers but indeed the admission of *any* given individual to the entry-level ranks of *académicien* no doubt lent incomparable legitimacy to those who did hold such positions.<sup>281</sup> This structure of delegated management and centralized authority was a thematic constant in early modern France, in this case deployed with the intention of ensuring that the Academy kept tightly oriented toward its twofold purpose of accruing glory to the king and serving "the practical interests of the state."<sup>282</sup> The latter, it is worth noting, was understood to be a long-term route to the former, but can today be understood as securing the utility of rationalists. So while the Academy was largely structured as a typical bureaucratic body (after 1699), its object was the production of the prestige which stemmed from both actionable truths and successes on that basis, as opposed to petty administration. Another key feature of the original Academy intended to facilitate its assimilation to the social elite and cultural mainstream was the decision to restrict its purview strictly to descriptive science.<sup>283</sup> This

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<sup>279</sup> Roger Hahn, *The Anatomy of a Scientific Institution: The Paris Academy of Sciences, 1666-1803*. (Berkeley: University of California Press, 1971).

<sup>280</sup> David J. Sturdy, *Science and Social Status: The Members of the Academie des Sciences 1666-1750*. (Woodbridge: Boydell & Brewer, 1995): 77.

<sup>281</sup> Hahn, *Anatomy*, 59.

<sup>282</sup> Sturdy, *Science and Status*, 68.

<sup>283</sup> *Ibid.*, 75.

was done to avoid conflict with the authoritative function of the universities, which maintained their public monopoly on metaphysical discourses.

The great mark of the Academy's prestige was its right to bypass the censors' review, an exception unique in this period when a modern system of state licensed publication was taking shape.<sup>284</sup> Texts that failed to find approval were, at best, printed in the Low Countries and smuggled into Paris, although such activities were actively prosecuted, and even with access to forbidden work, selectively designated legitimacy kept the printed word "remarkably well controlled" as sphere of official thought.<sup>285</sup> Above all else, this indicated the crown's trust in the Academy's capacity to meet the cultural standards set for it. In regards to this dignity, class privilege and expertise are relevant explanatory factors. But particular weight should be given to the good discursive breeding *savants* actively demonstrated by refraining from aesthetically troubling metaphysical dispute, as was their charge. With the same tactical duplicity that Cartesians maintained nominal subordination yet pursued empowerment in their private lives, the Academy began (almost immediately) approving scientific work produced by non-members as fit for publication.<sup>286</sup> By 1702, its leadership had gained official and "quasi-official" editorial control of two independent publications, *Connaissance des Temps* and *Journal des Sçavans*, respectively.<sup>287</sup> Beyond this, "strong-arm techniques" effectively controlled the voices of the numerous publications which the Academy designated as fit for print, while the reach of clout went farther still.<sup>288</sup> Even for those to whom other options were available, Academic approval lent unique credence to a product.<sup>289</sup> In less than fifty years, an exemption from censorship

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<sup>284</sup> James E. McClellan III, *Specialist Control: The Publications Committee of the Académie Royale Des Sciences (Paris), 1700-1793*. (Philadelphia: American Philosophical Society, 2003): 11.

<sup>285</sup> Shank, 123-24.

<sup>286</sup> McClellan, 11.

<sup>287</sup> Hahn, *Anatomy*, 63-64. "Quasi-official" here means an entrenched tradition of giving editorship to a secretary of the Academy.

<sup>288</sup> *Ibid.*, 65.

<sup>289</sup> McClellan, *Specialist Control*, 35.

developed into the *de facto* censor for all things scientific. That this was permitted to happen is good support for the notion that the Academy was held in high esteem by elite culture, but so too was the jealousy with which it protected the basis of its privilege, for there is a demonstrated awareness of the precariousness inherent to the position of institutional *de facto* Cartesians.<sup>290</sup> The vetting processes for the Academy's publications were so thorough as to raise [the author's] suspicions as to where scrutiny ended and a spectacle of diligence, for to reassure the dubious, began. To wit, anything published under the auspices of the Academy was first presented to the congregation of its membership, (auxiliary publications were instead reviewed by a team of commissaires for this stage) before then being considered by the powerful *Comité de Librairie*, the pinnacle of this symbolic hierarchy of discernment.<sup>291</sup> Works were rejected at this stage for inaccuracy, vagueness, unoriginality, and unacknowledged intellectual debts. Even then, it had still to pass through the peer-review system and perhaps multiple rounds of revision.<sup>292</sup> In contrast, the state considered the assent of an individual *académicien*, employed privately, to be sufficient rigor to pass a work through the standard channel of censorship.<sup>293</sup> In these ways, the Academy successfully enacted political hegemony over the burgeoning scientific consciousness in France, thereby elevating itself as the most visible and prestigious venue for exchanging ideas and accruing notoriety.<sup>294</sup>

The ritual meaning of this elaborate process was *submission*. He who submitted his work did the same with his pride, as both were callously cast off if no merit were found.<sup>295</sup> This could be called the proceduralization of Desgabets' fate, except the committee *also* held the right to require any editing or changes prior to printing. The author entered the process yielding all rights

<sup>290</sup> Nye, *Codes of Honor*, 15.

<sup>291</sup> McClellan, *Specialist Control*, 13.

<sup>292</sup> *Ibid.*, 30-35.

<sup>293</sup> *Ibid.*, 13.

<sup>294</sup> Hahn, *Anatomy*, 58.

<sup>295</sup> *Ibid.*, 31.

but that of basic intellectual property, but if the paper is rejected outright it means the Academy determined him to have made no such discovery. Thus, even beyond the legal and cultural control it achieved, the Academy demonstrated a penchant for empowerment with a distinctly literary, or perhaps masculine, sensibility. Scientific projects were uncased as coldly as though doing so were itself a scientific procedure, rather than a life's work. This often humiliating process was to emphasize the permissibility of that which was accepted, functioning as a socially significant *passing*. This act of submission by the component savant to the corporate whole was the central power-relation active in structuring the character of this sociability of "academic politeness" as subordinate to the French state.<sup>296</sup> Not only were none of those present at liberty to speak freely the truth as they saw it, but even among themselves they largely disavowed the meaning of their claims beyond the will the Lord. These factors prevented everything that can be called scientific valid in modern terms, yet the centrality of the textual normative threshold was established.

### *Academy of the privileged*

As much care was given to grooming the Academy's input as its output. Men spent entire careers working to find their way in.<sup>297</sup> One can imagine how frustrated such anonymous contributors, perhaps lifelong Parisians and loyal subjects, would have felt to struggle in this way, while esteemed thinkers from across Europe were invited by the Academy's leadership to emigrate and become members, with funding by the French state.<sup>298</sup> But this emphasis was the norm, when a reputation was the only effective route to further repute. Rather than being assembled as a team to reach some particular discovery first, membership of the Academy was

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<sup>296</sup> Biagioli, 196.

<sup>297</sup> Shank, *Newton Wars*, 37-40.

<sup>298</sup> Sturdy, *Science and Status*, 64. The Cassini family of astronomers serve as the most notable instance of this offer being accepted.

curated, like a museum. With the requisition of honor always in mind, the Academy was the purpose-built nexus of a process of ideological incorporation which drew in both men and works of distinction.

While the Academy would more formally become the clearing house of what might be termed French scientific mercantilism after 1699, looking to its early history reveals emphases which were later obscured.<sup>299</sup> The choice of founding members was of greater significance than the theoretical principles validated by that choice; indeed, theoretical convictions were themselves unattractive.<sup>300</sup> It was motivated instead by the rationalist mentality of the day, which is to say that novel, private experiences of truth which were class-coded, masculinized, mechanized and theologically subordinate were at least as tolerable as they were technologically instructive. Once chosen, a “communal instinct” developed which disposed them to record everything they did.<sup>301</sup> During this period, the activities of the Academy were relatively unstructured, with biweekly meetings at the center of its affairs.

By the decade preceding the reform, a situation of rampant absenteeism, incomplete minutes, and general disengagement had taken hold.<sup>302</sup> Eroded to the point of being treated as “merely a prestigious affiliation,” the Academy was in need of change.<sup>303</sup> This occurred for two primary reasons, both of which are proxies for social access. On the one hand was the disruption of the traditions of the original, close-knit community whose members were patronized by the minister of culture and other magistrates and aristocrats.<sup>304</sup> On the other, paid pensions were increasingly scarce.<sup>305</sup> “Pensions,” writes Alice Stroup, “implied a hierarchy within the

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<sup>299</sup> Hahn, *Anatomy*, 9.

<sup>300</sup> Sturdy, *Science and Status*, 77.

<sup>301</sup> Hahn, *Anatomy*, 3.

<sup>302</sup> Alice Stroup, *Royal Funding of the Parisian Académie Royale Des Sciences during the 1690s*. (Philadelphia: American Philosophical Society, 1987): 34-35.

<sup>303</sup> *Ibid.*, 38.

<sup>304</sup> Sturdy, *Science and Status*, 139.

<sup>305</sup> Stroup, *Royal Funding*, 38.



Academy.” They were based on the pensioner’s “international renown, their access to ministers and the king, and their social origins,” well beyond his productive work.<sup>306</sup> In the absence of a “personal fortune,” royal pensions or other kinds of patronage were a necessity.<sup>307</sup> Those in need took teaching positions and other work outside the Academy, certainly accounting for absences.<sup>308</sup> And, through the decade, pensions were defaulted upon, or distributed inconsistently.<sup>309</sup> To borrow Descartes’ phrase, *called neither by birth nor fortune to take part*, many found themselves unable to do so. The reforms for which Fontenelle was the public face not only emphasized the “homologies between academic and courtly civility” in discourse but also means, coming together as a newfound emphasis on manners as a route to patronage (as a route to legitimacy.)<sup>310</sup> That this scrutiny and reorientation for the Cartesianized subject would come in living memory after a similar experience of discursive policing, namely the Eucharist scandal of the early 1670s, must have been a difficult adjustment. In less than a decade “sociable virtues” had not only become “more than mere advantages,” but “potent requirements for asserting and establishing intellectual authority.”<sup>311</sup>

The most important change on the normative-descriptive level of managing the social interface between said and unsaid, in the balance of which the fate of Cartesians has been seen to have hung through the entirety of the seventeenth century, was the Academy’s *formalization*. Indeed the intervention of 1699 was not a true *reform*, due to the prior “absence of formal statutes,” a decision that has been interpreted as “a deliberate means of denying the Academicians the comfort of a guaranteed annuity.”<sup>312</sup> The ambitions of Colbert are certainly

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<sup>306</sup> Ibid., 20.

<sup>307</sup> Ibid., 25.

<sup>308</sup> Ibid., 26-27.

<sup>309</sup> Ibid., 28-29.

<sup>310</sup> Biagioli, 196.

<sup>311</sup> Shank, 104.

<sup>312</sup> Michel Delon, *Encyclopedia of the Enlightenment* (London: Routledge, 2013): 10.

visible in this, as are general patterns toward increased administrative control, but what else? The reforms are appropriately characterized as bringing the Academicians in from the shadows of “secrecy” and onto a path towards complicity and integration into hegemonic power structures, but one must wonder what they were doing out there in the first place; that they were being intentionally denied the option of “recourse to any legally binding document” only points to this question more emphatically.<sup>313</sup> The half-century of marginalization and mistrust of Cartesianism that was just beginning to give way by the 1690s points to at least a congruity of motivations. Conservatively, the threat of a dangerous element which Jansenism presented for Cartesianism, the rejection of substance and the animation of living beings, and the numerous other anti-Aristotelian worries presented by the Jesuits help to explain a reluctance to *articulate* a place in society which was purpose-built for exactly the sort of people who might be caught up with such subversive thinking. Particularly considering the rhetorical sensibility of the seventeenth century Cartesian dualist and how it might be approached by those who would come to terms with it, it should be asked how the claim of epistemological autonomy as a necessary structural feature of being and thus prior to discourse would be addressed by an absolute regime of descriptive power which valued both its aesthetic of domination, and practical truths. In short it makes sense that when his would-be technicians refuse to name the political dimension of privileges which they privately take as theoretically given, Louis XIV would respond in kind by refusing to name the social actuality of their position, what authority grounds it and what it says about them. In this light, the original meeting place of the Academy in the royal library appears as supervision.<sup>314</sup>

The legitimating force of the royal statutes opened the way for publicity to be pursued as a route to credibility.<sup>315</sup> This allowed for the relatively uncomplicated, elite in-group socialization

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<sup>313</sup> Ibid.

<sup>314</sup> Sturdy, 77.

<sup>315</sup> Shank, *Newton Wars*, 38.

among Academicians and the nobility, which did wonders for the reputation of the institution as a whole.<sup>316</sup> Following in this period, the conscientiously expanded institutional prestige could be deployed gainfully, alleviating financial issues for some.<sup>317</sup> And whether it should be considered an unspoken secondary goal of these reforms, or merely a manifest consequence of putting a Malebranchean at the discursive helm, the de facto integration of underground Cartesianism in the course of the 1699 reforms is crucial to understanding how the Academy could become more esteemed than it had been before. While the threat of scandal was by no means completely eliminated, the admission of Régis and Malebranche seems to have signalled the relative permissibility of having a personal history of intra-Cartesian theoretical disputation. This was no doubt instrumental in the many decades long process of lowering barriers of taboo surrounding Cartesian endeavors and honorable association with those who undertook them.

Creating a situation in which membership was valued as though “it were a title of nobility” was a crucial advancement of the Academy’s agenda, but it does not yet answer the question in regards to selection criteria.<sup>318</sup> In short, merit was only a relevant factor for men of bourgeois and noble status. Members did not emerge from the overwhelmingly large lower echelons of society.<sup>319</sup> University degrees were increasingly prominent, and family dynasties were not uncommon.<sup>320</sup> Of course, the central indication that prestige was functionally and symbolically equivalent to hierarchy in this context is the absence of women. A century before the founding of the Royal Academy of Science, the status of the *académicienne* was an open question, when elite women had participated in the less formal predecessor academies earlier in

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<sup>316</sup> Sturdy, *Science and Status*, 343.

<sup>317</sup> Ibid., 347.

<sup>318</sup> Hahn, *Anatomy*, 35.

<sup>319</sup> Sturdy, *Science and Status*, 261-62.

<sup>320</sup> Ibid., 345-46.

the century.<sup>321</sup> Women could be found as participants or spectators at any discussion or spectacle of science from which they were not barred. Unable to determine a single conclusive factor, Londa Schiebinger cites the Academy's "monarchical and hierarchical" nature, the formality conveyed by its election and salary practices, and its exclusiveness.<sup>322</sup> Indeed the confluence of these factors, as the measure of social access, is a convincing explanation. But this is to say that the explanation is not in the reasons why women were functionally barred, but those determining why those chosen were. It was crucial that many be excluded to indicate the special tendency toward prestigious work of the membership.<sup>323</sup> It selected for individuals who were ambitious in making themselves heard, but who nevertheless accepted personal and discursive subordination whenever appropriate.

*the meaning of publication*

Having furnished this social space and filled it with reputable men, how was the work to proceed? It was evident that learning should be recorded, but the next step was initially not as obvious as it would become, and printings were made for royal records, rather than publication.<sup>324</sup> At this stage, texts were functionally indistinguishable from the mapping and engineering projects in which the Academy was also engaged, and were produced as tools of state, rather than the benchmark of professionalism they would become.<sup>325</sup> In the earlier days of the Academy they had observed an "old, Baconian ideal" by publicizing findings anonymously, but came to reverse that policy completely (and abandon those values.)<sup>326</sup> The change of most

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<sup>321</sup> Londa Schiebinger, *The Mind has no Sex?: Women in the Origins of Modern Science*. (Cambridge: Harvard University Press, 1991): 21.

<sup>322</sup> *Ibid.*, 24.

<sup>323</sup> Sturdy, *Science and Status*, 343.

<sup>324</sup> Stroup, *Royal Funding*, 53.

<sup>325</sup> *Ibid.*, 54-57.

<sup>326</sup> G. Matthew Adkins, *The Idea of the Sciences in the French Enlightenment: A Reinterpretation* (Lanham: Rowman & Littlefield, 2013): 34.

enduring significance of the 1699 reforms was the formalized pivot toward publicity, and the recognition that greater honor resulted from the wider distribution of works.

The Academy from its inception was a place for sharing appropriate ideas with the appropriate audience.<sup>327</sup> It is worth noting here that, being assembled as such, and free to discuss their work with one another, there is no reason to think that the Academic community would have intuitively felt the absence of a printed compilation of the discoveries of everyone in the room, especially considering the normative leeway speech offers. They were, on the other hand, keenly aware of how easily discoveries, formulae, and inventions could be stolen. One of the Academy's oldest functions was as a measure against this: the formal procedure upon arriving at such a novelty was to deliver a sealed envelope attesting to one's discovery, to be dated for future comparison in the event of another claimant.<sup>328</sup> This allowed ideas to be shared without concern. It also reveals the significant fact that the *timestamping* and *authoritative* functions of the modern journal predated that of the circulation of articles.

Not merely the will to know, but the will to know *first*, drove the ambitions of the French state and the members of its Academy. It is difficult to conceive of a single rationale for this preoccupation other than the "showing forth of traits" which drives cultures of honor-bound masculinity.<sup>329</sup> In the research and development of a work of say, history, one could argue that the inherently laborious process which is necessarily concretized in a text will tend to lead its creator to feel a bit possessive of it. But it is not the right of authorship that is of concern here, for the kind of right asserted has been revealed to predate any meaningful association with a text. It is true that by the point in question at the turn of the eighteenth century, scientific experimentation often required expensive or complicated instruments, but this was far from the

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<sup>327</sup> Hahn, *Anatomy*, 3.

<sup>328</sup> McClellan, *Specialist Control*, 41-42.

<sup>329</sup> Nye, *Codes of Honor*, 20.

norm.<sup>330</sup> While egoism and financial investment might explain a desire on the part of the individual, this desire does not itself justify a right. Is the relevance of *identifying* the discursive subject not best explained by the fact that even casual Cartesians took seriously the view that any validly-formed truth-claim is a rational interpretation by some *res cogitans* concerning only appearances identical to itself, and is as such emergent from it in an ontologically irreducible manner? La Forge may have explained how claims based on intuitive judgements are not in the business of carrying *existential* (or in the fullness of time, causal) weight, and Malebranche offered reassurance that claimants were necessarily and apologetically mistaken if (socio-politically normative) God was slighted by their claim, but the functional epistemological role of the individual mind was nevertheless maintained in full fashion. And if the importance of a claim is to be wrapped up in the reputation of the claimant, as Descartes advocated be done and as elite European men of the period took increased care to do, then it must be attributed to an individual. The logic which drove the imperative within the Academy toward an individuated, textual procedure for adjudicating that which was official, true and circulated from that which was not, was served by functions of both praise and *blame*. The same record of authorship which proved rights of discovery also bound one to it, as official testimony complete. This can be seen as discursive insurance against another instance of the explanatorily muddled situation that called for the *ontological cataclysm* of Cartesian doubt in the first place, as a paper trail now existed which scrutinized and controlled individuals, if not as profoundly the epistemological basis for discernment.

The institutionalized journal was born from a new relationship between discovery and discoverer. The standardization of scientific literature was formally realized as one of the reforms,

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<sup>330</sup> Stroup, *Royal Funding*, 41.

which established *Histoire et Mémoires*, “the foremost scientific series of the century.”<sup>331</sup> It was the flagship publication of the Academy, presented as the year-in-review synopsis of scientific progress, “communicated to the Academy from all parts of the world,”<sup>332</sup> with an emphasis on sufficiently casual language for the non-professional public.<sup>333</sup> The discourses which had been seen as directly threatening the cultural function of the university system half a century earlier were given an organ of canonical expression. This same phenomenon can be seen as *Histoire et Mémoires* facilitating Academic professionalism to the extent that scientific goals and motivations were able to vary by individual, while compatibility was maintained by default.

For the average member, let alone the scientist submitting his observations from outside the Academy, the fight for the competitive pagespace was an uphill battle. In response to the widely promised and generally insufficient pensions of the pre-1699 era, the rank of *pensionnaire* was made to actually deliver on a comfortable stipend.<sup>334</sup> From this position of means above many of their associates, this rank succeeded in maintaining a dominance over the public discourse.

The *Comité de Librairie* existed to enforce the standards of scholarship befitting association with the Academy. Given that the perpetual aim was the maintenance and expansion of institutional honor, the judgements rendered are revealing. Papers were not only rejected for attesting to someone as the author who did not in fact write it, but also for being submitted anonymously after 1699.<sup>335</sup> Enormous care was taken to assure that information claimed as new was so in fact, a distinction which took into consideration the likelihood of duplicate prior

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<sup>331</sup> McClellan, *Specialist Control*, 1.

<sup>332</sup> John Chamberlayne, “Dedication,” in *The Lives of the French, Italian, and German Philosophers, Late Members of the Royal Academy of Science in Paris*, ed. John Chamberlayne (London: W. Innys, 1717).

<sup>333</sup> Shank, *Newton Wars*, 61.

<sup>334</sup> Hahn, *Anatomy*, 79.

<sup>335</sup> McClellan, *Specialist Control*, 31.

publications by the same author.<sup>336</sup> In the case of perfunctory approval by the *Comité* a paper would be examined in what is possibly the world's first peer review system.<sup>337</sup> This entailed research into claims and the repetition of experimental evidence. And to add further to the list of scientific cultural trends set by the Academy, citations recognizing debt to past works were a necessary component of approval, in anticipation of modern footnote practice.<sup>338</sup>

The Academy and its *Comité* gave and withheld recognition in a manner consistent with a self-conception as the arbiter of scientific truth. As has been seen, a capacity to bring to bear the implication of inauthenticity for any science it had not expressly approved came with the hegemonic stature.<sup>339</sup> But of far greater interest is the appearance of an anxious reservation in response to situations of ambiguity sufficient to render arbitration risky.<sup>340</sup> It is that same *reservation* characteristic of the interpersonal paradigm of civility and the royal mandate to the Academy, both manifestations of the concerns of political absolutism, as well as the epistemological sensibilities of Cartesian scientists.<sup>341</sup> Such evidence that the most powerful scientific institution at the beginning of the eighteenth century was concerned that it might tarnish its reputation, whether or not it was reasonable to do so, by publishing a single inaccuracy in place of a truth is yet another indication of the high-stakes, high-society discourses upon which its reputation hinged.

*the publication of meanings*

“By submitting his creation to the collective judgement of his colleagues,” writes Roger Hahn, dreamily, of the scientist, “he protected everyone—including himself—from the vagaries

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<sup>336</sup> Ibid., 31-32.

<sup>337</sup> Ibid., 33.

<sup>338</sup> Ibid.

<sup>339</sup> Ibid., 64.

<sup>340</sup> Ibid., 62.

<sup>341</sup> Biagioli, 202 & 203.



of his imagination and the subjectivities of individual creation.”<sup>342</sup> It remains to be seen what protection there is against the specificities of his appropriation, or the objectivities created by his collective. What remains is to examine how the rules, practices, and obligations of the Academy made the promotion of an attitude of pragmatic, *metaphysical quasi-realism* the best means by which to serve the interests of the various parties, and how Malebranchian thought and the capacity it gave “natural philosophy...to approximate the certainty which is available in mathematics” was central to this development.<sup>343</sup>

Contention within the institution was to be avoided at all costs, and was met with reprimand.<sup>344</sup> Likewise, members were forbidden to criticize the Academy, and were held responsible for any disrespectful activities discovered to be undertaken elsewhere.<sup>345</sup> In general, though, members were happy to maintain their reputation of being motivated by “professional honor, and devotion toward the public good.”<sup>346</sup> In the same vein, disputed topics were unlikely to be published. Instead, the subjects which were most likely to find their way into *Histoire et Mémoires* were those that were uncontroversial given the political and cultural context of the Academy, and novel to its discourse without drawing upon metaphysical innovation.

These two requirements could, judging by what was in fact published, be satisfied by anything from a description of the effect of approaching rain on a barometer,<sup>347</sup> to that of a brazen description of torture of a madwoman (many more stories of abuse grace these hallowed pages.)<sup>348</sup> This appears to be an especially strange reality in view of the often purported virtue of

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<sup>342</sup> Hahn, *Anatomy*, 57.

<sup>343</sup> Clarke, *Occult Powers*, 131.

<sup>344</sup> McClellan, *Specialist Control*, 49.

<sup>345</sup> Hahn, *Anatomy*, 64-65.

<sup>346</sup> Shank, *Newton Wars*, 40.

<sup>347</sup> “On the cause of the variation of the barometer,” in *The Philosophical History and Memoirs [of 1711] of the Royal Academy of Sciences at Paris*, trans. John Martyn and Ephraim Chambers (London: John & Paul Knapton, 1742):85-88.

<sup>348</sup> M. Tauvry, “upon the Madness called HYDROPHOBY,” in *The Philosophical History and Memoirs [of 1717] of the Royal Academy of Sciences at Paris*, trans. John Martyn and Ephraim Chambers (London: John & Paul

experimentation; that is, until it is recognized that experimentation was understood particularly as, and valued for its capacity to allow, “the deliberate abandonment of verbal dispute” (or more accurately it was a *substitute* for the disputation which had been denied a legitimate place.)<sup>349</sup> Prior historically to the development of a metaphysically satisfying yet actionable scientific method and extolled in generality beyond any basis in quantified data, what is this experimental ideal but, to adapt a phrase, “a poetry of soldierly decorum,” enjoining a company of equals by their shared experience of entitlement, in the name of science?<sup>350</sup> Truly, experimentation in the typical sense of the word is simply the testing of limits, something which, for a member of the elite in early modern France, referred only towards those who were even more socially elevated, and not to those below. Any system which could further naturalize this arrangement, such as traditions of professional courtesy in addition to experimentation, served an important ideological purpose. In the Cartesian context experimentation has been shown to be no different from experience, at least in terms of the phenomenal data procured. Any similarity to modern scientific experiment must be a function of the role played by the rational subject, which, in the absence of any empiricism, was primarily a socio-political one.

*locating the new science of motion*

At this point it is clear that whatever served to fill the pages of the official publication exemplifying the work of an institution which forbade discussion of religion and politics outright, and which limited even conversations about “*morality, history, or grammar*” to be “only in passing and in relation to physics or to exchanges among men,” must have been to some extent *arbitrary*.<sup>351</sup> A range of related ways in which this necessity might be understood have

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Knapton, 1742):235-240.

<sup>349</sup> Hahn, *Anatomy*, 7.

<sup>350</sup> Nye, *Codes of Honor*, 20.

<sup>351</sup> Hahn, *Anatomy*, 12. Indignant italics mine.

been considered, including the aesthetic priorities of absolutist monarchy, the normative political function of mysteries of theology, the social impossibility of organic and continuous metaphysical debate and subsequent discursive coherence of philosophical principles due in large part to the silence coerced by these first two factors, and the *still open question* of how *any* epistemology, sufficiently proceduralized as to be called scientific, might function within Cartesian dualism (at last count, mainline occasionalism was avowedly speculative and Malebranchian “ideas in God” had been widely critiqued as unrealistic and ontologically baroque.) The *Comité de Librairie* was only as authoritative as the standards by which it judged, and the cultural logic of the day saw propriety as best served by the empowerment of an individual to narrativize these standards. This was the agenda which guided Fontenelle’s career.

Bernard Le Bovier de Fontenelle was to the rationalist cultural situation of Cartesian thought as Voltaire would be to the *esprit* of experimentalism a generation later. He was not scientifically productive, but understood and embraced the implications of the new sciences and New Philosophy in a distinctly evangelical manner. Prior to his reformatory role in the Academy, Fontenelle had already established himself as a uniquely entertaining proponent of intellectual modernism, by means of his 1686 *Entretiens sur la pluralité des mondes habités*. As the title suggests, this literary work explores the most titillating possibilities presented by the anti-Aristotelian lineage in cosmology which connected Copernican heliocentricity to the Cartesian vortical physics which it informed, speculating on no less than the possibility of astronautics, the likelihood of extraterrestrial life, and the implications of the recent discovery of the “compelling ubiquity of [microscopic] life”; that *pluralité des mondes* presented a vision of a radical cultural modernism in which “anthropocentrism is obsolete,” but was nevertheless published *legally* in France, says a great deal about the author’s elevated place within a socio-discursive regime of

class and sex status (likewise does the innovatively condescending *gallantry* with which the masculine narrator instructs his noblewoman interlocutor, but as a model for gendered yet civil (which is to say, *passing*) discourses of intellectual franchise, rather than as a mere benefit from power relations.)<sup>352</sup>

By all accounts, Fontenelle was welcome and indeed belonged “at the center of French intellectual life.”<sup>353</sup> His career in letters was funded by his uncles Pierre and Thomas Corneille, both of whom were famous authors; this class background and industry connection was a perfect route of “access to the intellectual and social circles of Paris.”<sup>354</sup> In 1691 he became a member of both the *Académie des sciences* and *Académie française*, the latter being the institution tasked with rendering the one true French language and which spent the decade finishing the first edition of its *Le Dictionnaire de l'Académie française dédié au Roy*; then, in 1701, just two years after his extensive role publicizing the changes to the *Académie des sciences*, he was inducted into the freshly expanded ranks of the antiquarian *Académie des Inscriptions et Belles-Lettres*, the institution concerned with the majesty of history and prose.<sup>355</sup> As a member of a *majority* of the five bodies which would later be incorporated as the *Institut de France*, he enjoyed social access and discursive purchase at the heart of the statist project of intellectual modernism. As his two other Academic positions show, Fontenelle was recognized as demonstrating technical precision as well as exquisite style in his writing, both of which were crucial to the descriptive responsibilities of perpetual secretary. Apparently taking the perpetuity seriously, Fontenelle's appointment to the position in 1697 and assumption of responsibilities in 1699 overlapped with the ambiguous persistence of the old secretary, Jean-Baptiste du Hamel, until his death in 1706;

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<sup>352</sup> Luciano Floridi & Edward Craig, *Routledge Encyclopedia of Philosophy* (London: Taylor & Francis): 691.

<sup>353</sup> Sheffield, 60.

<sup>354</sup> Floridi, 690.

<sup>355</sup> Sheffield, 60.

his “awkward relations” and advocacy for Latinate scientific discourse reveal his maladaptation to the changes afoot by that time.<sup>356</sup> His incapacity to travel led to the *Sçavans* editor Gallois being brought into the Academy from 1668 as assistant secretary.<sup>357</sup>

While mere consent had already been *bred* as a narrow range of metaphysical dispositions and *groomed* as the convergence of both active and passive manifestations of privilege, the appearance of a more thoroughgoing unanimity did indeed require *manufacture*. Securing an aesthetic of coherence within the Academy can fairly be understood as a two-man job, with Fontenelle being the “man on the inside,” if inside is to indicate the normative discourse of scientific description. Fontenelle was its “intelligencer,” and Jean-Paul Bignon was its power broker.<sup>358</sup>

The development which occasioned the possibility of a thaw in relations and an institutional initiative towards a reduction of official anti-Cartesian rhetoric and policy was, fittingly, the redistribution of ministerial powers at the highest levels of government. With the sudden death in 1691 of *Secrétaire d'État de la Guerre* François Michel le Tellier, marquis de Louvois, who had held executive control over *all* the academies, the king granted those same powers to his *Secrétaire d'État à la Maison du Roi* Louis Phélypeaux, comte de Pontchartrain.<sup>359</sup> A transfer of jurisdiction between these two Great Offices in particular suggests a great deal about how drastically the social image of the new sciences might have changed in the course of just thirty-three years; whereas the original rationale for the Academy had been presented rather seriously as its being a source of innovations in weapons technology, (something as ugly as anti-aristotelianism could only be put toward an ugly end) by the end of the century it was

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<sup>356</sup> Sturdy, 351.

<sup>357</sup> Ibid., 87.

<sup>358</sup> Hahn, 3.

<sup>359</sup> Adkins, 34.

appropriate to the king's chief of staff, minister of Catholic and Protestant affairs as well as for the city of Paris.<sup>360</sup> In 1699 he also became the first modern Chancellor of France, the position responsible for ensuring the subsequent political efficacy of the declarative speech of the king. The enormously powerful Pontchartrain's sister was married to Jérôme Bignon II, father to Jean-Paul and middle of three successive *avocats général* to the parlement of Paris, sending the whole “family spiralling up the social scale [sic]”; the Bignon in question had all the advantages which might have “predestined him to a career of distinction,” even abandoning the Port-Royalism of his grandfather, which would have been wholly untenable after the Edict of Nantes was revoked in 1685.<sup>361</sup> However, one tradition he did share with Jérôme I was to be made *grand maître* of the king's library.<sup>362</sup>

Pontchartrain appointed his nephew as his representative in the Academy (entailing full membership) the year he was given that power, which was also that in which Bignon was ordained. Indeed much of Pontchartrain's power was delegated to Bignon, rendering him the “de facto culture minister” with nebulous authority over all the academies.<sup>363</sup> At some point during that decade he got himself elected president over the Academy of sciences, and in 1697 gave Fontenelle his distinguished position.<sup>364</sup> The chairmanship functioned as both a debate moderator and representative for the crown and was reappointed annually by the king; Bignon also dominated this, serving thirty-two times in thirty-five years.<sup>365</sup> Is it any surprise that someone so well connected to positions of power would, when reforming the Academy, structure it “as a strict hierarchy?”<sup>366</sup>

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<sup>360</sup> Hahn, 21.

<sup>361</sup> Sturdy, 224-25.

<sup>362</sup> Ibid., 367.

<sup>363</sup> Shank, 61.

<sup>364</sup> Jean Le Rond d'Alembert, *Académie Royale des Sciences, 1751*, trans. David Moak (Ann Arbor: University of Michigan Library, 2007).

<sup>365</sup> Delon, 11.

<sup>366</sup> Ibid., 10.

Fontenelle would later present a legacy stretching back to the turn of the century, of staunchly defended Cartesianism within the Academy.<sup>367</sup> Hopefully it is apparent at this point how strange this would have been if it were true. What *did* exist from that time was the establishment of an approach to interpreting the nature of motion as the norm, which was itself informed by Malebranche's take on Cartesian metaphysics, and that had been in the works since before Fontenelle was involved. The eventual name of this method, “analytic mechanics,” betrays its emergence from the synthesis of the new Leibnizian calculus and the Augustinian's occasionalism in metaphysics.<sup>368</sup> That synthesis itself had been the work of the group of academicians called (in natural philosophical contexts) the Malebranche circle, most prominent among whom was Guillaume François Antoine, Marquis de l'Hospital.<sup>369</sup> Malebranche and l'Hospital had been instructed in the new infinitesimal calculus by Johann Bernoulli during his trip to Paris in 1691.<sup>370</sup> Malebranche's metaphysics and calculus was a match made in heaven for a number of reasons: Malebranche was by far the Cartesian most interested in reconciling the infinite, and calculus served this approach well; his occasionalism carved out a space for mathematics to describe *only* a sequence of phenomena while nevertheless communicating the absolute location of a material body as grounded in God (and thus circumventing the ontological problems of mathematical representation); and infinitesimal calculus allowed the theoretical characterization of natural infinitesimals, or the actual, infinitely small substances which were central to Descartes' corpuscularianism in physics.

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<sup>367</sup> Shank, 47.

<sup>368</sup> Ibid., 57 & 58.

<sup>369</sup> Clarke, *Occult Powers*, 20.

<sup>370</sup> Gert Schubring, *Conflicts Between Generalization, Rigor, and Intuition: Number Concepts Underlying the Development of Analysis in 17th-19th Century France and Germany*, in *Sources and Studies in the History of Mathematics and Physical Sciences* (New York: Springer, 2006): 187-88.

Pierre Varignon, the member of Malebranche's circle who pioneered analytic mechanics in 1692 and simply called it “the new science of motion,” had been inspired to do so by his reading of Isaac Newton's 1687 *Philosophiæ Naturalis Principia Mathematica*.<sup>371</sup> Newton's work was also a science of motion, but one which appeared incomplete to French eyes for two reasons, the first being its intentional lack of epistemological claims, and the other was that he hid the centrality of his own infinitesimal calculus to the discoveries he presented.<sup>372</sup> But those were things a Cartesian metaphysics circa 1690 could provide. Fontenelle played his part by insisting that analytical mechanics was consistent with the spirit of both its Cartesian and Newtonian influences.<sup>373</sup>

For as long as Bignon and Fontenelle had been plotting their institutional hegemony, they were already banking on the new analytical mechanics with the intention to silence its detractors and promote its advocates, respectively. The aim was to begin the new era of Academic life under public scrutiny, already giving the impression that Varignon's analytics were well established, to which end he was invited to present his work at two of the first four public demonstrations; Fontenelle had these published in the popular literary magazine *Mercure gallant*, which had already been preparing the reading public for years before the 1699 debut by running articles on math to create a “vogue for Malebranchean mathematical philosophy.”<sup>374</sup> Further, Fontenelle made great use of his privilege of writing the summaries of and introductions to diverse works, consistently presenting them as validating Descartes' own cosmology. His view that heavenly motion was planets being swirled around in numerous celestial *vortices* satisfied the requirement of his corpuscularian that there be no void. While key Cartesians such as

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<sup>371</sup> Shank, 58.

<sup>372</sup> Ibid., 56.

<sup>373</sup> Ibid., 64.

<sup>374</sup> Ibid., 62.



Malebranche, Fontenelle, and Rohault were avowed vorticists, many more remained uncommitted on the issue, as they had been trained to do.<sup>375</sup> At the turn of the century Fontenelle began to take the liberty of committing them himself, systematically giving “the impression that vortical mechanics was more central to French academic science than in fact it was”; this was the expressive component of what J.B. Shank calls the “*pax analytica*,” the normative “consensual harmony” which was brought to bear upon academic discourse from the moment the Pontchartrain regime had infiltrated the institution through the end date of this study in 1709, by which time the desired state had more or less been wrought in the textual output of French printing.<sup>376</sup>

In the first few years of the century, however, challenges did appear to this hegemonic image of public science and the central place calculus occupied within it. There were those within the Academy who did not endorse the analytical use to which calculus was being put. These partisans of the “ancients,” as Fontenelle was sure to classify them, took to the old *Journal des sçavans* to criticize Varignon and his collaborators in 1702.<sup>377</sup> The newly founded Jesuit publication, *Journal de Trévoux*, had been doing the same since the year before, but it must have been a special shock that *sçavans* would turn on the Academy, but it had always been in Colbert's sphere. In the interest of maintaining their good standing, Malebranche and Varignon recruited Joseph Saurin, an analytical mechanist from outside the Academy, to respond on their behalf in *Journal des sçavans* in 1703; when Bignon intervened, he was able to forbid Varignon and his antagonist publish further responses, and had to call on Saurin's “honor as a gentleman to

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<sup>375</sup> Ibid., 57.

<sup>376</sup> Ibid., 68 & 69.

<sup>377</sup> Ibid., 63.

do the same.”<sup>378</sup> Bignon eventually followed up by threatening to “block the renewal of the *Journal [de Trévoux]* printing privilege.”<sup>379</sup>

Saurin was eventually inducted in 1707 under Varignon's sponsorship, and was rapidly promoted up the Academy hierarchy.<sup>380</sup> Varignon was then able to sponsor another new analytic, René Antoine Ferchault de Réaumur to join the following year, and Réaumur was allowed to publish that *same* year.<sup>381</sup> Fontenelle went as far as to comment on the rising stardom which seemed to be attracted to Varignon, as though he himself had not crafted that narrative. Selecting for analytical mechanists was just the first step, and was followed by the exaggeration of their homogeneity and then the marginalization of their detractors. Bignon also took a hand in Réaumur's career after 1708, quickly making him a full pensioner. Réaumur was to be praised for his accessible and entertaining style by both Fontenelle and the Jesuits alike.<sup>382</sup> But it was not to last, and the beauty of science has ultimately proven to be its ability to give way. But briefly, the French establishment, and even to a large extent the English one, were in some kind of agreement. Varignon had synthesized not only the ideality of mathematics with Malebranche's metaphysical account of perception as being oriented towards such ideals, but also merged the practical and *de facto* approved reading of Descartes with the productive interests of the state. The virtue of this discovery in itself was no more disrupted by its prized role within the French establishment than earlier ones had been invalidated by official condemnation. However, the downside of sponsorship over marginalization is the likelihood that such ideas overstay their welcome; when Bernoulli visited the Academy a few decades after he and Malebranche had helped to introduce calculus there, he was horrified to discover that it was being “misapplied” by

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<sup>378</sup> Ibid.

<sup>379</sup> Hahn, 65.

<sup>380</sup> Shank, 70.

<sup>381</sup> Ibid., 77.

<sup>382</sup> Ibid., 78.

many, as though compulsory stagnation made it difficult to distinguish the good from the bad.<sup>383</sup>

But at any rate, it was Newton's 1706 work called *Opticks*, in which he made sure to make its account of universal gravitation unmistakable, which made the *pax analytica* untenable.<sup>384</sup>

At the height of its relevance and legitimacy at this time, the Cartesian establishment which had defiantly rejected *rapport* began to agitate with increased coherence for “*verisimilitude*.”<sup>385</sup> This sort of language expresses in a word what is best described as a *quasi-realism*, and which would characterize the response of the French Cartesian scientific establishment to a growing number of voices which would oppose it. The year that Descartes was later called “the greatest of geometers” by a Jesuit journal was the same year that a member of the Academy broke rank, although the fact that it was Saurin again who did so indicates that he was probably reprising his role as the fall guy.<sup>386</sup> He did not do so in print, but instead spoke out against attractionism at the Academy's “spring public assembly” at the beginning of that year.<sup>387</sup> It was a move that was unprecedented in the Academy's decade of formal existence, and which set the tone for the begrudging Jesuit endorsement of Cartesianism against an occult new science mentioned in the introduction. In a 1709 review of the 1702 work *Astronomiae physicae et Geometricae Elementa*, by the radicalized British attractionist David Gregory, it was lamented that “if only one could ignore [the attractionist] principle, the subtlety of the geometry that is used throughout would make it an excellent work.”<sup>388</sup> This sort of rhetoric, in addition of course to comparisons between attractionism and Spinozism and thus implications of heresy, characterized the polemical tradition to follow.<sup>389</sup> He was charged with being *unable to give an*

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<sup>383</sup> Ibid., 74.

<sup>384</sup> Ibid., 113.

<sup>385</sup> Ibid., 111. Emphasis mine.

<sup>386</sup> Ibid., 124.

<sup>387</sup> Ibid.

<sup>388</sup> Ibid., 125.

<sup>389</sup> Ibid., 126.

*account* of the “inclination natural and occult [of bodies] to unite with one another” which was central to his Newtonianism.<sup>390</sup> This may very well have been the first instance of modern theoretically-induced blindness. This is to say that it was less an issue of accounting for certain phenomena, which universal gravitation did, but rather what it was technically possible to say about phenomena, in giving that account. Because material bodies could at best be described as giving the striking impression of interacting, but that this impression was only an *occasion* for them to be mutually caused to change by God, no theory which drew upon their *actual* presence was acceptable, and least of all one which assigned actual powers to the mere fact of that presence. As the decade progressed, the dissonance of the Cartesian advocacy for a quasi-realism in physics only became more pronounced. “It is here that the sympathies and attractions would come to the rescue,” Fontenelle would later write in the introduction to a work on chemical reactions, “if only there were such things.”<sup>391</sup>

An appreciation for this discursive situation of French Cartesian institutional science circa 1709 marks the culmination of this history. What follows is well-studied as none other than the Enlightenment, the great rupture in which the power of rationality triumphed over ignorance. Hopefully, however, the linearity of that progression has been complicated by the preceding narrative. For immediately preceding that break, the established discourse which was most prominent in resisting the “modernity” of Newtonian experimentalism was not, as would universally be assumed, that of traditional and uncritical dogma. It was Cartesianism that had weathered that storm in the domain of cosmology. Instead of appearing *too innovative*, Newtonianism seemed, in modern terms, to employ *magical thinking*, or to simply be *naïve*. It is *this*, historically and arguably philosophically, that marks the division between philosophy and

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<sup>390</sup> Ibid., 125.

<sup>391</sup> Ibid., 118.

science. The metaphysical regime which reconciled the vagaries of perception with the specificity of the new sciences took it as a necessary feature of knowledge that it features a structurally implicit fallible observer; this system developed to accommodate the practical needs of that *res cogitans* as both an epistemological ground and as a socially-bound human agent. But the radicalism of that development could not possibly compare to that which sought to erase it. The naïvete of the scholastics had been their faith in the inferential authority of “natural judgment.”<sup>392</sup> For those discourses which would most properly be called modern science, it would be no less than the suggestion that *no such judgment* features in scientific explanation, or in Newton's eventual words, “*hypotheses non fingo*.”<sup>393</sup>

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<sup>392</sup> Clarke, *Occult Powers*, 65.

<sup>393</sup> Isaac Newton, “General Scholium,” in *Philosophiæ Naturalis Principia Mathematica*, 2<sup>nd</sup> ed. (Cambridge, 1713): 392.

## Conclusion

The famous declaration, typically translated as “I frame no hypotheses,” but presented idiosyncratically here as *I feign no under-fiction* so as to highlight analogy of construction, (admittedly across a Greco-Roman linguistic barrier) was Newton's great metaphysical intervention. It appeared in his *General Scholium*, an addition to the 1713 reprint of *Principia*, and thus falls outside of the strict time line of unnameable Cartesianism presented here, but at any rate, Newton's silence on the matter had been taken as guilt of precisely this sort of conviction. Of the cause, which the French demanded be understood prior to any toleration of attractionist theories, and which Newton understood must “penetrate to the very centers of the Sun and Planets, without suffering the least diminution of its force,” but of which he knew nothing more, he *refused* the established demand that he give an account; this is the context of *hypotheses non fingo*.<sup>394</sup> Further elaboration on his anti-hypothetical method might seem strange to the modern scientist, but in view of the occasional, probabilistic understanding of hypothetical claims established by the occasionalist Cartesian establishment, Newton's argument that “whatever is not deduc'd from the phaenomena, is to be called an hypothesis; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy” is far more intelligible. Here he stakes his point of dispute on the relationship between explanatory accounts and perceptual phenomena. The hypotheses of Rohault and his followers, and particularly as explicated by Malebranche's vision in God, served to account for the structural presence of understanding in the very act of bearing witness. Whether or not it was strictly accurate, a hypothesis could explain a phenomenon in such a way as to be wholly compatible with appearances, and would in that sense *be* the understanding of what was seen. Simply put, establishment rationalism aimed to rationalize appearances.

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<sup>394</sup> Ibid.

Phenomena were not the *tool* that they would become, but a feature of consciousness; it is tempting to read in the Newtonian response the reassertion of the basis in the *cogito* and subsequent subordination of the experiential components of *res cogitans*, but this is probably too coherently philosophical. Newton, as the French were well aware, was less interested in understanding than *predicting*, and saw this as the proper understanding of science. In his introduction to the *Principia*, editor Roger Cotes demanded on the author's behalf, “shall gravity be therefore called an occult cause, and thrown out of philosophy, because the cause of gravity is occult and not yet discovered? ... When we are arrived at the most simple cause we can go no farther. Therefore no mechanical account or explanation of the most simple cause is to be expected or given.”<sup>395</sup> This is an irreconcilable break from the metaphysical tradition of science which proceeded him. Newton presumes to shift from accounting for what *seems* to happen, to what *actually* happens, and in this way returns to the world the naïvete of presuming to apprehend actuality on a basis more fundamental than semblance. In a striking and antagonistic reference to the way “a bit of fine down and a piece of solid gold descend with equal velocity” in the vacuum of space, Newton advises that “*the parity of reason must take place in the celestial spaces* above the Earth's atmosphere.”<sup>396</sup> This would truly be met with laughter by French Cartesians, who take the location of the reasoning subject to be a serious metaphysical question with actual scientific implications. The rest of the Scholium is spent playing fast and loose with ontological concepts in a way that indicates, at very least in comparison to his French contemporaries, Newton cares little for the meaning inherent to words.<sup>397</sup> If the man of letters is to be distinguished from the man of *numbers*, then of the latter class Newton may be the first

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<sup>395</sup> Roger Cotes, “Editor's preface,” in *Philosophiæ Naturalis Principia Mathematica*, 2<sup>nd</sup> ed. (Cambridge, 1713).

<sup>396</sup> Newton, *Principia*, 388. Emphasis mine.

<sup>397</sup> Ibid., 390-91. Amateurish highlights include: “Blind metaphysical necessity, which is certainly the same always and every where, could produce no variety of things.” & “Since every particle of space is *always*, and every indivisible moment of Duration is *everywhere*...”

among the moderns. But with the inadequacy of the Cartesian phenomenism also being acknowledged, the historical situation of the subject-matter of ongoing dispute in the philosophy of science is given here.

So too has a historical picture of an important moment of development of the socio-political and epistemological implications of the text been presented, namely the genesis of the institutionalized academic journal. If the subordination, sterilization and mechanization of descriptions of the natural world entails the masculinization of knowledge, then the proceduralization of testimony reflects the masculinization of the *known*, and the ambitiously sociable *savant* reflects the masculinization of the *knower*. Not only was Newtonian gravitation a step back from the strictures of rationalism in epistemology, it also represents passing the related peak of the descriptive authority which could be claimed in the text, for the “unseen nature” of the mechanism “invalidates the authority of the individual since he is no longer capable of limitless representation,” which Erickson takes as necessitating the turn towards instrumentalism about scientific validity, and experimentalism as a way of erasing the traces of the limited subject.<sup>398</sup> Truth was subsequently recuperated as “facts [as] contextualized statements,” validated not by the experience of the individual bearing testimony, but the “system that produced them.”<sup>399</sup> This logic demanded a greater emphasis on the masculinized style of writing which allowed “the writer to speak as an outsider,” even as he became less of one in social terms, and debatably so in ontological terms.<sup>400</sup> It is interesting that specifically as the totalizing descriptive power of Cartesianized writing gave way, the appeals to authority inherent to the literary style of scientific prose only became more pronounced. This, in addition to the increased emphasis on hustling for the sort of social stature that lends credence to one's claims, might

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<sup>398</sup> Erickson, 14 & 15.

<sup>399</sup> Ibid., 17.

<sup>400</sup> Ibid., 21.



actually reflect the demise of absolute description. The power to codify and control the truth might have been unattainable on a true metaphysical level, but that seems to have had no effect on the *desire* to do so, and the social practices which were established under Cartesian metaphysical auspices. The ownership of discovery and the prestige of the author seem to have, on a functional level, persisted by embracing the mere performativity of rational description, if not the dream of certainty it once carried. It will be left to the reader to infer what stands to be said about the modern history of science on this basis, as well as the nature of this work itself.

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